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FISH AND WILDLIFE RESOURCES AS RELATED TO WATER POLLUTION CHESAPEAKE BAY AND TRIBUTARIES (EXCEPT SUSQUEHANNA RIVER BASIN)

Bureau of Sport Fisheries and Wildlife
Atlantic, Georgia

October 1968

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FISH AND WILDLIFE RESOURCES AS RELATED TO WATER POLLUTION CHESAPEAKE BAY AND TRIBUTARIES (EXCEPT SUSQUEHANNA RIVER BASIN)

Prepared for
Middle Atlantic Region
Federal Water Pollution Control Administration
Charlottesville, Virginia

by
UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE
SOUTHEAST REGION (4)
ATLANTA, GEORGIA
OCTOBER 1968

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THE STUDY

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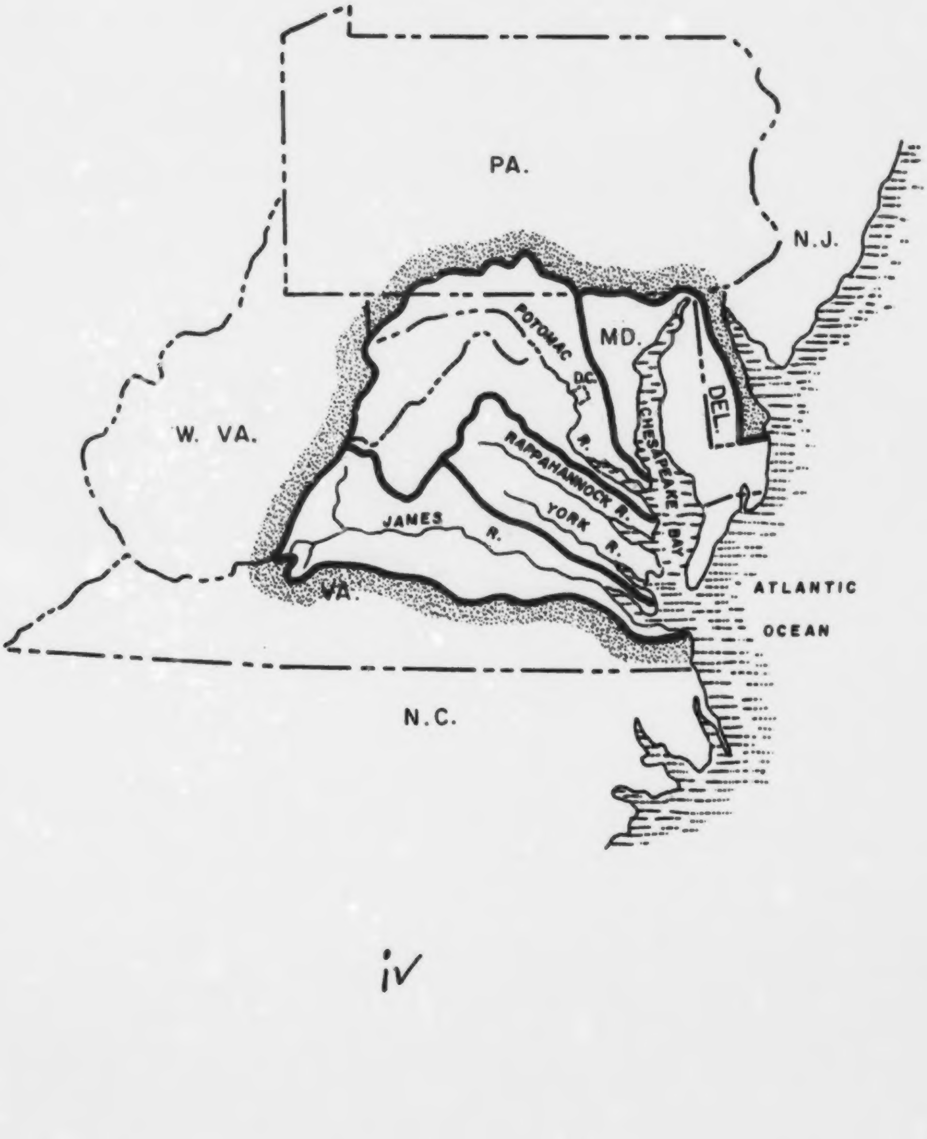

PA.
N.J.
MD.
DEL.
D.C.
POTOMAC R.
W. VA.
CHESAPEAKE BAY
RAPPAHANNOCK R.
YORK R.
JAMES R.
VA.
ATLANTIC OCEAN
N.C.

FISH AND WILDLIFE RESOURCES AS RELATED TO WATER POLLUTION CHESAPEAKE BAY AND TRIBUTARIES (EXCEPT SUSQUEHANNA RIVER BASIN)

INTRODUCTION

Unfavorable alteration of the natural environment by adding an effluent to a degree that the residing biota is adversely affected is often described in present-day jargon as "pollution." Man, through his intelligence and technical skills, has developed a complex and lavish standard of living. Marvelous advances have lifted him to his present eminence, but at the same time his byproducts and discarded materials have increased until, at present, they contaminate large portions of the total environment.

Pollution problems have increased significantly throughout the United States during this century. Today, pollution adversely affects the optimum utilization of water resources for industrial and municipal purposes, recreation, fish and wildlife, and other beneficial uses. Increasing population, with corresponding agricultural, urban, and industrial growth, is rapidly aggravating this situation. Recognizing this increasing problem, Congress authorized the development of comprehensive programs for water pollution control by passage of the Federal Water Pollution Control Act of 1956 (P.L. 84-660), as amended by P.L. 87-88. This Act provides for the formulation of comprehensive basinwide programs for water quality management. In response to these assigned tasks, the Federal Water Pollution Control Administration has initiated a series of basin studies with the cooperation of State, local, and other Federal agencies. One of these basin studies is the

Chesapeake Bay-Susquehanna River Basins project encompassing Chesapeake Bay and all its drainages. This study was started in 1963 with completion scheduled for 1968. Fish and wildlife data used by this agency for the Susquehanna River Basin will be developed by the Northeast Region (5) of the Bureau of Sport Fisheries and Wildlife, incidental to its participation in the Corps of Engineers' comprehensive study of that basin. Data for Chesapeake Bay proper and all remaining tributary basins were developed by the Southeast Region (4) of the Bureau of Sport Fisheries and Wildlife under contract with the Federal Water Pollution Control Administration and are presented in this report.

In early 1965, the Southeast Region (4) of the Bureau of Sport Fisheries and Wildlife, initiated fish and wildlife studies covering Chesapeake Bay and all its tributaries except the Susquehanna River Basin. The objectives of this study were to inventory and classify existing fish and wetland wildlife habitats and relate pollution effects to production potentials and the capabilities of these habitats to meet user demand over the next 50 years. Many other Federal and State agencies cooperated in this Bureau effort. Special recognition is given to assistance and data provided by the Bureau of Commercial Fisheries, Maryland Department of Game and Inland Fish, Maryland Department of Chesapeake Bay Affairs, Maryland Department of Water Resources, Natural Resources Institute of the University of Maryland, Delaware Game and Fish Commission, Pennsylvania Fish Commission, Pennsylvania Game Commission, West Virginia Department of Natural Resources, Virginia Commission of Game and Inland Fisheries, Virginia Commission on Marine Resources, Virginia Institute of Marine Science, Virginia Department of Natural Resources, and U.S. Department of Agriculture, Soil Conservation Service offices in Maryland and Virginia.

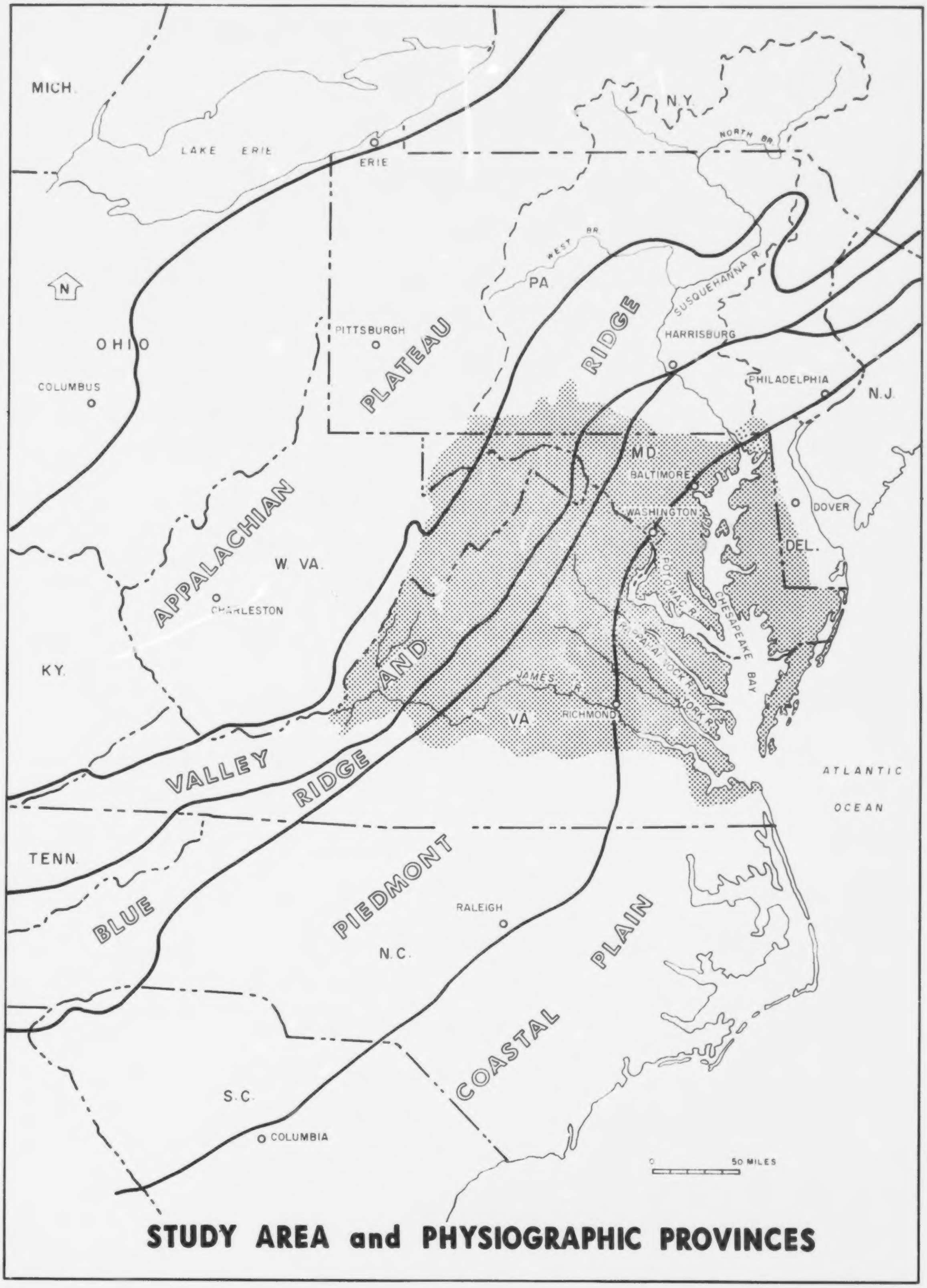
The final compilation and interpretation of data and report preparation was the sole responsibility of the Southeast Region (4) of the Bureau of Sport Fisheries and Wildlife and is not intended to represent the official views or conclusions of other agencies.

DESCRIPTION OF THE AREA

The study area covered by biological considerations in this report includes Chesapeake Bay and its tributaries, except the Susquehanna River Basin, (plate A). This area includes the major drainages of the James, Rappahannock-York, and Potomac Rivers as well as Chesapeake Bay and its minor tributaries. These drainages encompass virtually all of Maryland, a sizable portion of Virginia, and smaller segments of Delaware, Pennsylvania, and West Virginia.

Chesapeake Bay is, geologically, the drowned mouth of the Susquehanna River. Its total length of over 200 miles and width of up to 40 miles make it the largest tidal estuary in the United States. About 80 percent of the total basin is drained by the Susquehanna, Potomac, and James Rivers. The Susquehanna is the country's largest Atlantic Coast basin with a drainage area of 27,000 square miles, while the Potomac and James Rivers contribute 14,700 and 10,000 square miles respectively.

Physiographic features of the study area are represented by five parallel bands extending in a northeastern-southwestern direction (plate A). The


MICH.
LAKE ERIE
ERIE
N.Y.
NORTH BR.
WEST BR.
PA
SUSQUEHANNA R.
N
OHIO
COLUMBUS
PITTSBURGH
PLATEAU
RIDGE
HARRISBURG
PHILADELPHIA
N.J.
MD.
BALTIMORE
WASHINGTON
DOVER
DEL.
APPALACHIAN
W. VA.
CHARLESTON
POTOMAC R.
RAPPAHANNOCK R.
CHESAPEAKE BAY
YORK R.
KY.
JAMES R.
AND
VA
RICHMOND
ATLANTIC OCEAN
VALLEY
RIDGE
TENN.
BLUE
PIEDMONT
RALEIGH
N.C.
PLAIN
COASTAL
S.C.
COLUMBIA
0
50 MILES

STUDY AREA and PHYSIOGRAPHIC PROVINCES

PLATE A

lowest elevations rising from the Atlantic Ocean are in the Coastal Plain Province. Inland, the terrain becomes more rolling and rises to the Piedmont Province. This, in turn, gives way to the Blue Ridge Province, then the Valley and Ridge Province, and finally the Appalachian Plateau. Ridges and mountains in the interior provinces range in elevation from 1,200 to over 4,000 feet above mean sea level. The three interior provinces are characterized by parallel mountain ridges and valleys extending in long continuous bands from northeast to southwest.

Stream characteristics are generally related to geological and topographic features, with land use and vegetative cover exerting more local influence. Characteristics of streams in the mountain areas are largely influenced by the physiographic features found in each region. The Appalachian Plateau is a high, deeply dissected plateau formed from gently warped rocks of bedded shales and sandstone. The Valley and Ridge Province which is formed by a series of comparatively narrow sandstone ridges paralleling predominantly shale and limestone valleys, and the Blue Ridge Province, a relatively narrow mountainous belt consisting of sharply folded quartzites, slates, and shales. In general, shallow soils are predominate in these regions and because of their topographic features, these areas are largely forested.

Flows in mountain streams tend to be flashy in nature, with high flood and low base flows. Discharges are translated rapidly downstream. Waters in these streams are generally free of silt except during flood stages. As a result, turbidity and sedimentation do not present problems of the magnitude found elsewhere in the study area.

The Piedmont Province is a sloping belt characterized by rolling hills and fairly broad valleys. Streams in this section experience highly variable discharges, but physical features tend to provide for higher rates of base flow. Soils composed of schists, gneisses, and igneous rocks are loose structured and easily eroded when vegetative cover is removed. Sedimentation and turbidity are more prevalent problems in streams of this area because of the high degree of agricultural and urban development.

The Coastal Plain is a gently sloping area consisting of mixed sands, clays, and marls extending from the fall line to the sea. Base flows in coastal streams tend to be high. Turbidity and sedimentation are not as great a problem in this area as in the Piedmont. However, these streams drain swamps, bogs, and other areas with high organic content. The term "black water" has been applied to streams of this area because the waters are highly stained by tannins and lignins resulting from decomposition of plant detritus.

The climate in the study area is generally temperate with extremes more prevalent in the Valley and Ridge, and Appalachian Plateau Provinces. The winters vary from rigorous, but not severe in the highlands to moderate in the coastal areas. Summers are generally warm with a long frost-free season east of the mountains. The mean annual temperatures range from about 60° F. in coastal areas to 50° F. in the mountains. Average annual precipitation ranges from 30-35 inches in the Appalachian foothills to 45 inches along the Blue Ridge crest. Snowfall occurs in all sections of the region every winter, with average depths varying from 50 inches in the mountains to 10 inches in the Coastal Plain.

Present day centers of population are located along the coast and on major waterways. These include Washington, Baltimore, Norfolk, and Richmond. Data available from a base economic study of the Chesapeake Bay drainage indicate a gradual shift from rural to urban population, with these same areas continuing to contain sizable portions of the total population in the future.[1] Population of the study area was approximately 7,046,000 in 1960. This is expected to increase to about 9,792,000 in 1980, 13,715,000 in 2000, and 19,691,000 in 2020. This represents an increase of about 280 percent over the next 50 years.

GOALS AND METHODS

The Chesapeake Bay-Susquehanna River Basins project is part of a national water quality control effort. The purpose of this study is to acquire the most complete knowledge possible of existing water quality conditions, project future requirements, and formulate a plan for effective water quality control over the next 50 years. The basic goals of this program are to improve, protect, and preserve the quality of water resources including ground, and inland and coastal surface waters for all beneficial uses.

The Bureau of Sport Fisheries and Wildlife participated in this study for the purpose of providing base data on fish and wildlife resources. These

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1. "Summary Economic Base Study, Chesapeake Bay Drainage Basins." National Planning Association, Washington, D.C., 1967.

data are intended for incorporation in the total study to help determine present and future water quality control needs. For the purposes of this study it was determined that only those resources directly dependent on surface water should be included. Therefore, only fish and wetland wildlife resources were considered.

Limitations on available time and funds, coupled with size of the study area, dictated that the appraisal of pollution effect on fish and wildlife must be made on a general quantitative basis. This meant that data must come primarily from existing records or the experience of informed authorities. In instances where data were lacking, methods were devised to extrapolate it using available information or the concensus of experts in the field.

Total fish and wetland wildlife studies were organized into four basic phases: resource classification and inventory, resource productive capability, effects of pollution, and projection of resource supply and demand.

Resource classification and inventory was conducted for fish habitat, wetland wildlife habitat, and related publicly owned facilities. Classification of fish habitat was divided into natural waters (streams and bays) and impounded waters. Stream habitat in Maryland was classified by Van Deusen in 1954.[1] This system was used, although the application was modified to some extent, in classifying all remaining water areas in the study area. A general description of Van Deusen's ecological classes is presented in table A along with our modifications. An additional ecological class, salt water (class 12), was added to differentiate between tidal fresh-water areas and salt-water areas. The criterion for determining the dividing point between these two areas was based on the salinity tolerance level of largemouth bass and bluegill sunfish. Classification of natural waters was conducted in the field by teams of Federal and State biologists, assisted by technicians and game protectors. Inventory of these water areas was accomplished using available United States Geological Survey topographic and U.S. Coast and Geodetic Survey coastal maps, salinity profiles of the study area,[1] plus stream dimension data gathered in the field. Impounded waters were classified according to relative size, grouping ponds (class P) less than 40 acres and reservoir (class R) 40 acres and over. Inventory data for impounded waters were taken from available Soil Conservation Service and State records, plus topographic maps.

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[1] R. D. Van Deusen, "Maryland Freshwater Stream Classification by Watershed." Chesapeake Biological Laboratory, Contribution No. 106, May 1954.

Wetland wildlife habitat classification and inventory data were taken from the State data developed for "Wetlands of the United States," 1956, prepared by the Bureau of Sport Fisheries and Wildlife. This national wetlands survey placed major emphasis on the relationship and value of wetland habitat to waterfowl resources on a State-by-State basis. This same emphasis is likewise reflected in the data incorporated in this report.

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[1] E. D. Stroud & R. J. Lynn, "Atlas of Salinity and Temperature Distribution in Chesapeake Bay 1952-61 and Seasonal Averages 1949-61." Chesapeake Bay Institute and Johns Hopkins University, February 1963.

TABLE A
FISH HABITAT CLASSIFICATION SYSTEM
Description and Classification System of Maryland Streams[1]

Code	Stream Class	Width (Feet)	Depth	Temp.	Water Quality	Bottom	Flow	Volume	Characteristic Forms	Shade and Cover	Miscellaneous Characters
1	Dace Trickle	0 to 3	Very Shallow	Cool	Usually Clear, Clean Water Except in Spring	Boulders Gravel Sand	Little	Little	Blacknose Dace	Usually Has Some Forest Cover, But May Have None	Extreme Upper Reaches of Most Streams
2	Trout Feeder	0 to 7	Shallow	Cold	Clear, Clean Water	Rubble to Gravel	Little to Medium	Little to Medium	Trout, Muddlers, and Creek Chubs	Moderate Shade Insufficient Stream Cover for the Large Fish	Water Volume Not Enough to Support Legal-Sized Trout Population
3	Trout Stream	5 and Over	Shallow with Pools	Cold	Clear, Clean Water	Rubble to Gravel	Medium to Moderate	Medium to Moderate	Trout, Muddlers, River and Creek Chubs	Moderate Amount of Shade and Cover for Fish	With Trout Feeder Streams Flowing into Main Axis
4	Sucker Stream	1 to 20	Medium	Cool	Intermediate: May Carry Silt At Times	Sand and Gravel	Medium	Medium	Common Sucker and Common Shiner	Lacks Shade and Cover	Has Characteristics of a Trout Stream and May Fall Below
5	Bass Feeder	10 and Over	Shallow With Pools	Cool	Clear to Slightly Turbid Water	Sand and Gravel	Medium	Medium	Smallmouth Bass, Crayfish, and Mussels	Medium Amount of Cover and Shade	Insufficient Volume of Water to Support Legal Population of Bass
6	Bass Stream	10 and Over	Medium with Pools	Cool	Clear to Slightly Turbid Water	Sand and Gravel	Moderate	Moderate	Smallmouth Bass, Chubs, and Crayfish	Medium Amount of Shade and Moderate Amount of Cover	Sufficient Volume and Deep Pools
7	Pickerel Stream	20 and Over	Moderate With Pools	Cool to Warm	Dark, Turbid Waters	Muck and Sand	Medium to Slow	Medium	Chain Pickerel, Sunfish and Crappie and Golden Shiner	Moderate Shade and Cover	Aquatic Vegetation Serves as Stream Cover
8	Bullhead Stream	20-50	Medium	Warm to Cool	Turbid Water	Mud and Muck	Little to Medium	Medium to Little	Bullheads and Variety of Sunfishes	Medium Shade and Cover	Only Occasional Pools
9	Catfish Stream	70 and Over	Moderate	Cool to Warm	Turbid Water	Mud Sand Gravel	Medium	Medium and Moderate	Catfish, Bullheads, and Variety of Panfishes	Medium Shade and Cover	Frequent Deep Pools
10	Carp Stream	70 and Over	Medium-Moderate	Warm	Muddy, Sometimes Highly Turbid Water	Mud and Muck	Medium	Little to Medium	Carp, Sunfishes, and Catfish in Marginal Areas	Little Shade and Cover	Characterized by Only a Few Species of Fish Present
11	Tidal Stream	5 and Over	Medium	Warm	Seasonally Clear and Muddy, More or Less Brackish	Sand Muck Peat	Slow to Medium	Medium	Variety of Fresh and Brackish Water Forms	Shade Sparse and Little Stream Cover	Shallow to Deep Channels with Bars

Additional Classes Used in this Study[2]

12	Salt Water	Tidal river, bay, or sound with an average spring salinity in excess of 3.5 p.p.t. (10 percent of sea strength).
R	Res.	Impoundments with a surface area of 40 acres or over.
P	Pond	Impoundments with a surface area of less than 40 acres.

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[1] Van Deusen, R. D., "Maryland Freshwater Stream Classification by Watershed." Chesapeake Biological Laboratory, Contribution No. 106, May 1954.

[2] Added by Bureau of Sport Fisheries and Wildlife.

Publicly owned facilities relating to fish and wetland wildlife were inventoried and grouped according to their associated resource. These data were extracted from appropriate State and Federal publications and records. No privately owned or private enterprise facilities were included in this inventory. Although these private facilities frequently outnumber publicly owned installations, they were not included because of their varied availability to the general public. Some of these facilities are strictly private, others are established on a membership basis, while still others are open to the general public and operated as a business.

Resource productive capability (without existing pollution) was calculated for finfish and shellfish resources in relationship to each habitat class. The wide ranges of production levels (pounds per acre) that exist for each habitat class, species, water area, and individual year dictated that average figures must be used. Existing data on fish populations, harvest rates, shellfish production, stocking rates, etc., were in many instances quite limited for a specific water area. As a result, an average annual standing crop of fish was used for each habitat class except in instances where available data dictated that an adjustment was necessary. In computing the value of the sport fishery, an average sustained yield of harvestable species and creel per man-day was determined using available data and the concensus judgment of participating Federal and State biologists. Unit dollar values were selected from the range of values outlined in Senate Document No. 97.[1] Similar procedures were used in estimating the productive capability for ponds and reservoirs with appropriate variations to compensate for size and productive zone of the impoundments. Commercial finfish productive capability was based on historic catch records for the bay area and available population dynamics research. Shellfish production was based on degree of management and past harvest records for each major water area. The dollar value of the commercial harvest is expressed as ex-vessel value for both finfish and shellfish. Pertinent evaluation data used in estimating the fishery resource productive capacity are presented in table B.

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[1] "Evaluation Standards for Primary Outdoor Recreation Benefits," Senate Document No. 97, Supplement No. 1, June 4, 1964.

In this report the emphasis placed on wetland wildlife habitat has been limited to waterfowl resources. Wetlands in the study area are considered primarily as wintering and harvest areas, although some are used for nesting and brood rearing by such species as wood ducks, mallards, and black ducks. Since the major waterfowl breeding grounds are located in more northern latitudes, we have not assigned a specific per acre productive capacity for study area wetlands. It is well recognized that wetlands provide essential habitat for many forms of fish and other wildlife. In fact, some wetland types are more important to fish and other wildlife resources than to waterfowl. We do not want to deemphasize the importance and value of wetlands to these other resources, but adequate treatment of this subject would involve many factors which are not entirely within the purpose and scope of this report.

Effects of pollution on fish and wildlife resources were based on information contained in available publications and records. In addition,

TABLE B

AVERAGE PRODUCTIVE CAPABILITY OF FISH HABITAT CLASSES

Fish Habitat Class (Code)	Standing Crop Range (lbs./acre)	Sustained Annual Harvest (lbs./acre)	Creel/Man-Day (lbs.)
1	negligible	0	0
2	20 - 100	8	0.5
3	20 - 100	14	0.5
4	30 - 100	15	1.0
5	75 - 150	22	1.0
6	100 - 200	30	1.0
7	120 - 175	38	1.0
8	100 - 250	44	1.0
9	100 - 300	50	1.0
10	100 - 300	50	1.0
11	300 - 500	30 Sport 40 Commercial	2.0 --
12	400 - 600	15 Sport 110 Commercial	4.0 --
P	100 - 500	75	1.0
R	100 - 300	30	1.0

field reconnaissances were made with appropriate State biologists, game protectors, oyster inspectors, and technicians. In an effort to keep this information chronologically uniform, a cutoff date of December 1966 was used. After the inventory of polluted areas was complete, the data were reviewed in detail with Federal and State water quality authorities to determine their completeness and to make necessary adjustments. Effects of water pollution on finfish and shellfish resources were difficult to determine owing to the lack of sufficient water quality data on identified problem areas. Therefore, the scope of evaluating pollution effects was largely restricted to making judgment estimates in the affected areas in cooperation with State biologists and technicians using as the basis all available data. In general, five categories were established for illustrating estimates of pollution effects on fishery resources. A general explanation of these categories is presented in table C. From the outset of this study, the limited available information indicated that water pollution had relatively minor detrimental effects on wetland habitat. Therefore, it was decided that coverage of wetland wildlife habitat would be restricted to classification and inventory, unless contrary evidence was obtained during the study.

Projections of resource supply and demand were made for a period of 50 years, extending from 1970 to 2020. The gross limitations of any long-term projection of this type were realized from the outset. Therefore, these projections are not intended as precise data that can be related to individual areas throughout the study area. Instead, the total supply-demand projections are intended to give insight into relative future

TABLE C

POLLUTION EFFECTS ON FISHERY RESOURCES

Pollution Category	Effect on Fishery
Negligible	Waters polluted to a minor degree with a relatively insignificant reduction in standing crop, harvest, and/or fishing. No reduction assigned; however, any further degradation of water quality would cause discernible losses and place the water area in a more serious pollution category.
Light	Waters polluted to such a degree that a 25 percent reduction has occurred in standing crop, harvest, and/or fishing.
Moderate	Waters polluted to such a degree that a 50 percent reduction has occurred in standing crop, harvest, and/or fishing.
Intense	Waters polluted to such a degree that a 75 percent reduction has occurred in standing crop, harvest, and/or fishing.
Severe	Waters polluted to such a degree that approximately 100 percent or total loss has occurred in standing crop, harvest, and/or fishing. This category includes closed shellfish grounds.

conditions, thereby identifying areas of concern, and specific habitat types and localities that deserve special consideration in development of future water quality programs.

The maximum available supply of finfish was calculated on the basis of average annual sustained harvest capability (with and without existing pollution) for each habitat type and was compiled for each of the four major hydrologic subdivisions and the total study area. The maximum available supply of shellfish was calculated on the basis of recent average annual harvest rates (with and without existing pollution) from shellfish grounds and was compiled for each water area and the total study area. The future effects of pollution were assumed to be equivalent to present levels. This was due to the fact that accurate projected future pollution data for specific streams or habitat classes were not available. Because of the growing concern for pollution control, it was assumed that the maximum permissible pollution level would not exceed present conditions. This concern is reflected in the Federal Water Pollution Control Act, as amended by the Water Quality Act of 1965, which authorizes the States and Federal Government to establish water quality standards for interstate, including coastal, waters. Paragraph 3, section 10, of the Act states that, "Standards of quality established pursuant to this subsection shall be such as to protect the public health or welfare, enhance the quality of water and serve the purposes of this Act."

This report recognizes that the maximum potential for oyster production in the study area could greatly exceed the natural capability of existing shellfish grounds, through the implementation of advanced cultural methods. It is very probable that oyster production can be expanded to meet the projected demand in any year through the use of appropriate farming techniques.

The projected demand for fishery resources was separated into sport fishing demand for finfish and commercial demand for both finfish and shellfish. Sport fishing demand was calculated using population projections provided by the Federal Water Pollution Control Administration[1] plus factors taken from the Bureau's most recent National Survey of Fishing and Hunting[2] and developed during the course of this study. Commercial fishing demand was calculated by expanding current harvest rates using factors extracted from a projection of United States commercial fishery consumption provided by the Bureau of Commercial Fisheries. This Bureau expects the demand for commercial fishery products from the study area to closely parallel the expanding need for commercial fishery resources predicted for the United States.

RESULTS

To evaluate the relative effect of pollution on fish and wildlife resources, the total resource potential under polluted conditions was compared with what would be available if pollution were eliminated. These resource potentials, both with and without pollution, were then compared to the expected user demand to determine their relative availability under both conditions. Specific data on present, future, or projected conditions are often minimal or lacking. Therefore, data analysis must be made on a general basis. This dictates that study results should be recognized as being relative in nature and utilized to gain an insight into problem areas. Figures quoted in the remaining portions of this narrative represent rounded data extracted from supporting tables contained in the appendix.

---

[1] Based on "Summary Economic Base Study, Chesapeake Bay Drainage Basins." National Planning Association, Washington, D.C., 1967.

[2] "1965 National Survey of Fishing and Hunting." U.S. Department of the Interior, Resource Publication 27.

Fishery resources in the study area are quite diverse as influenced by variations in geophysical and hydrological factors. All fish habitat was classified and inventoried (tables 1 through 12 and plates 1 through 8), except small stream of insufficient size to support fishable populations (class 1). This inventory revealed that the study area contains approximately 3,194,000 surface acres of fish habitat. Ecological classification was based on physical characteristics of the water courses and quality aspects of the waters. The first major breakdown in classification separated 2 lentic (standing) water classes and 12 lotic (running) water classes (table A).

The study area contains no natural lakes of significance. Therefore, all lentic waters are manmade impoundments. These impoundments are quite distinctive in their individual characteristics, yet they can be grouped on the basis of size, water quality, drainage features, etc. In this study, lentic waters were separated into two groups: impoundments less than 40 surface acres (ponds) and impoundments 40 surface acres or over (reservoirs). Ponds and reservoirs are built where needs and suitable damsites exist. In general, they are more abundant in the Coastal Plain and Piedmont than in the mountain areas. At present, there are approximately 32,000 acres of ponds in the study area having a sustained average annual harvest capability of 2,424,000 pounds under current conditions. Reservoirs total 29,000 acres with a sustained average annual harvest capability of 881,000 pounds (table 1).

Lotic waters in the study area include 12 habitat classes. In general, cold-water habitat, such as trout streams, is found in the mountain areas where high elevation, shallow soils, and forested conditions prevail. As elevation drops, cold-water streams give way to cool-water habitat types such as sucker and bass streams, more commonly found in the Valley and Ridge, and Blue Ridge Provinces. In less precipitious areas of the Piedmont, catfish, bullhead, and carp streams predominate. Gradient ceases to be a significant factor in the Coastal Plain, and the black water streams of this area fall into the pickerel and tidal classes. The upper and relatively fresh-water reaches of Chesapeake Bay are also classed as tidal. The lower reaches of streams that empty into lower Chesapeake Bay, and the lower bay itself are classed as salt water. Lotic waters of the study area total approximately 3,132,000 acres of streams and bays (table 1). This may be further divided into 65,000 acres of fresh-water streams, 306,000 acres of fresh-water tidal streams and bays, and 2,762,000 acres of salt-water rivers and bays. These lotic waters are capable of providing sport fishermen an average annual sustained yield of 51,762,000 pounds, and commercial fishermen 313,397,000 pounds of finfish, and 105,000,000 pounds of shellfish.

Salt water (class 12) represents about 86 percent of the water area in the study area, with the remaining 14 percent comprised of all classes of fresh water. Approximately 95 percent of the area's current fishery capability is derived from salt water (class 12). Of the remaining 5 percent, fresh-water tidal streams and bays (class 11) provide about 4 percent, and only 1 percent is supplied by smaller streams and impoundments. For more detailed fishery resource information, please consult tables 1 through 12 and plates 1 through 8.

Wetland wildlife habitat refers to lowlands covered with shallow and sometimes temporary or intermittent waters, but does not include permanent open waters. Information presented in this report is based on the 1954 nationwide inventory of wetlands in relationship to their wildlife value, which was published in summary form as FWS Circular 39, "Wetlands of the United States," dated 1956. Wetlands were classified and inventoried according to 20 ecological types and each area assigned one of four value categories based primarily on waterfowl utilization. The Chesapeake Bay study area contains wetlands representing 13 of the 20 ecological types. Habitat evaluation relating to the four value categories was based primarily on State significance rather than regional or national. This survey indicated that the study area contained 614,000 acres of wetlands which were divided into 131,000 acres of high value, 155,000 acres of moderate value, 191,000 acres of low value, and 137,000 acres of negligible value (tables 13 through 17 and plates 9 through 12).

Complete updating of this national survey has not been attempted. However, in 1966 Maryland Department of Game and Inland Fish made an inventory of wetland losses occurring since the earlier survey in seven upper Chesapeake Bay counties. This study indicated that losses varied from a high of 35 percent in Prince Georges County to a low of 2 percent in Kent County, with a 7-county average loss of about 14 percent resulting from drainage, land fill, highway construction, and similar developments. The Virginia Commission of Game and Inland Fisheries estimates that their wetland losses have amounted to about 5 percent over the same period. Using this information, it is possible to revise the earlier data to reflect approximate current conditions. Therefore, wetland wildlife habitat currently occupies about 558,000 acres in the study area, representing 115,000 acres of high value, 139,000 acres of moderate value, 177,000 acres of low value, and 127,000 acres of negligible value.

Publicly owned facilities in the study area relating to fish and wetland wildlife include 16 fish hatcheries, 74 public boat launching ramps, 130 impoundments encompassing 25,300 acres of water open to public fishing and 30 wetland wildlife developments totaling 94,400 acres (tables 18 through 22 and plates 9 through 12). These publicly owned or leased areas provide a permanent, but limited, base for accommodating use of fish and wetland wildlife resources. These facilities do not necessarily fulfill the minimum requirements for access and utilization, and most public agencies have a continuing program for developing and enlarging fish and wetland wildlife public use facilities.

Publicly owned fish hatcheries and rearing stations located in the study area produce a large, but limited, quantity of fishes which are utilized to stock newly created waters or restock existing waters throughout the area. Production in these hatcheries is primarily limited to fresh-water game species such as largemouth bass, bluegill, and rainbow and brown trout. However, other species including striped bass, catfish, and muskellunge are also produced but on a much smaller scale. Only a few privately owned fish hatcheries are in the study area, and their production is limited to several popular fresh-water game species, which are sold to restaurants and food stores.

The 74 boat launching ramps do not include those ramps located on public impoundments and wetland developments, since access to these areas is considered to be a part of their establishment and development. Utilization of fishing waters is almost directly related to their location and accessibility. Proximity to population centers, transportation routes, surface area of water, shoreline ownership, and established boat launching ramps play a major role in distributing fisherman usage over available water areas. Therefore, public programs for developing access lanes or boat launching ramps are basically designed to provide access to public waters which would be relatively inaccessible otherwise. Private or private enterprise boat ramps, fishing camps, and marinas far exceed the number of publicly owned fisherman access facilities in the study area. As a result, these private installations provide for a majority of the demand for access to public waters. However, the distribution of these privately owned facilities does not furnish an adequate distribution of fisherman usage based on productive capability of the available water areas.

At present, there are about 130 public impoundments open to fishing throughout the area. They total approximately 25,300 acres and represent about 41 percent of the impounded waters in the study area.

Wetland developments are primarily State and Federal waterfowl management units, but they also include several wetland areas which are being protected as a portion of parks, recreation areas, and other publicly owned installations. There are 30 wetland developments in the study area, with a total area of approximately 94,400 acres. Considering the quantity of wetland habitat present today, existing wetland developments are protecting about 17 percent of this valuable but diminishing habitat.

Pollution effects on fishery resources were found to be widely distributed throughout the study area (tables 23 through 38 and plates 13 through 16). A variety of substances were recognized as contributing to the pollution problem, and based upon their origin, they were grouped as agricultural, municipal, or industrial wastes. The effects of agricultural pollutants, consisting primarily of silt, fertilizers, insecticides, herbicides, and animal wastes, are difficult to detect owing to their more subtle effects on productivity and fishing, and their widespread entry into waters of the study area. In a few instances, the cumulative effects of agricultural practices have conspicuously affected both fish production and fishing. However, the synergistic effects of this group have gone largely undiagnosed during the course of this study. Because of the limited amount of water quality data and the lack of long-term studies, identification of pollution effects was primarily restricted to areas affected by concentrated discharges of municipal and industrial effluents. For the purpose of this study, water pollution is defined as the alteration of water quality by man's activities to such a degree that existing populations, harvest and/or value of fish and wildlife resources have been detrimentally affected. Identification and delineation of polluted water areas was limited to those where information was available from existing records or consensus of informed sources. Undoubtedly, there are additional areas where effluents have adversely affected the biota in some respects but have gone undetected.

The synergistic effects of municipal and industrial pollution on fishery resources were more readily detectable because of the high effluent concentrations released near municipalities and industrial complexes. Human waste, plus a multitude of other household and industrial byproducts, contributes heavily to organic loads which deplete oxygen supplies needed to maintain healthy fish populations. In addition, these wastes often contain pathogenic bacteria which are accumulated by shellfish, making them potentially dangerous disease carriers and unfit for human consumption.

Industrial waste frequently contains a wide assortment of detrimental effluents ranging from sand and gravel waste to complex chemical compounds including acid mine waste. These latter types of effluent are commonly toxic to aquatic biota and fish kills frequently result from accidental or intentional discharge of this type of waste.

Singlely, or in complex mixtures, these three main groups of pollution waste were found in sufficient quantities to affect a total of 463,000 acres of fish habitat in the study area (table 23). Of this total, productivity and/or fishing use is significantly reduced on 101,000 acres of finfish habitat and harvest is prohibited on 42,000 acres of shellfish habitat. Average annual pollution losses were estimated to be $1,861,000 for finfish and $1,090,000 for shellfish, or a total annual fishery resource loss of about $2,951,000. The Chesapeake Bay area was the most seriously affected of the study area's four major subdivisions with 42 percent of the dollar loss, followed by the James River Basin (38 percent), Potomac River Basin (13 percent), and the Rappahannock-York River Basins (6 percent). Pollution affects about 14 percent of the study area's 3,194,000 surface acres of fish habitat. This fact may be misleading since there are four stream habitat classes where pollution affects about 65 to 90 percent of the particular habitat class in the study area (table 24).

The most notable examples of pollution in fresh-water areas include acid mine drainage in the upper North Branch Potomac River and tributaries; industrial waste in portions of the upper James River Basin, Shenandoah River below Front Royal, and Little Elk Creek in the Chesapeake Bay area. Numerous instances of serious municipal pollution occur throughout the study area. A unique problem common to major rivers in all four subdivisions is the entry of large quantities of both municipal and industrial effluents at points near the upper limits of tidal influence. Typical examples are the Patapsco at Baltimore, the Potomac at Washington, the James at Richmond, and the Rappahannock at Fredericksburg. Here, where fresh water from the upper basins encounters the tidal force of the sea, wastes cause septic conditions during low rainfall periods. These influences extend to varying degrees into lower portions of the estuaries. Municipal effluents also affect portions of shellfish grounds in salt waters of the study area, prohibiting harvest for human consumption. Details concerning fishery resources affected by pollution are presented in tables 23 through 38 and plates 13 through 16.

The effects of pollution on wetland wildlife habitat were not found to be a significant factor affecting waterfowl production in the study area since the majority of this production takes place in more northern latitudes. Additionally, pollution did not significantly affect waterfowl use of most wetland habitat or hunting pressure in the study area. However, serious wetland habitat losses are caused by excavating and filling these valuable fish and wildlife areas. Siltation and turbidity associated with this excavating and filling cause additional and frequently widespread degradation of surrounding habitat.

The major pollution problems relating to waterfowl in the study area are oil spills, and siltation and turbidity. In recent years, oil spills in the upper bay area, in the vicinity of Baltimore, have resulted in the death of up to 5,000 waterfowl on a single occasion. These oil spills are of important concern; however, their impact on overall waterfowl populations is not as serious and widespread as the detrimental effects of siltation and turbidity. Aquatic biota which provides the bulk of the waterfowl food supply in the area has been critically reduced in quality and quantity, and even eliminated in certain areas, by siltation and turbidity. Other pollutants which have a moderate, intense, or severe effect on fishery resources also have a detrimental effect on waterfowl utilization.

Public facilities relating to fish and wildlife are not significantly affected by pollution, primarily because these facilities have in most instances been located in nonpolluted areas.

Projections of resource supply and demand hold the key to the relative importance of pollution effects on fishery resources and their utilization (tables 39 through 44). Pollution is most evident in circumstances where utilization (demand) equals or exceeds the existing resource supply. On the other hand, if the supply exceeds the utilization rate, the same pollution level may gain less attention. Therefore, an analysis of supply versus anticipated utilization must be made in order to appraise the impact of pollution effects.

As utilization rates increase, there are simultaneous changes in resource availability. Although natural habitat may remain fairly constant, its quality is continually under the stress of added pollution and habitat degradation. Additional habitat, in the form of reservoirs and ponds, is being continually added to the total fishery resource supply. Increased fishing pressure of a growing population may overexploit certain areas until the harvest levels are reduced. These and other more subtle factors all interact to make a supply-utilization-pollution analysis quite difficult. This is particularly true when it is considered that in some areas there is intense competition for available fishery resources by sport and commercial interests.

Sport fishing is distributed throughout the entire study area, while commercial fishing is limited almost entirely to tidal fresh water and salt water areas. Sport fishing utilization is basically a reflection of available leisure time, suitable fishing areas, and people with a desire to fish. Therefore, the steady increase in sport fishing utilization can be primarily attributed to the increases in population and leisure time when suitable fishing areas exist (tables 39 and 40).

The earliest comprehensive analysis of sport fishing over a broad geographical area was the 1955 National Survey of Fishing and Hunting, conducted by Crossley S-D Surveys, Inc., under contract to the U.S. Fish and Wildlife Service. Since that time, similar surveys were conducted in 1960 and 1965. Thus, data covering a period of about 10 years are available to analyze selected factors relating to sport fishing. However, this period is rather short, and factors covered in these surveys do not supply data necessary to do a comprehensive supply-utilization-pollution analysis. Therefore, the best that can be done is a generalized comparison between the calculated fishery supply (with and without pollution) and the projected fisherman demand (table 44).

This type of general analysis indicates that at the present time total annual demand for fresh-water fishery production about equals the productive capability that can be met by the habitat with existing levels of pollution. If pollution were corrected, the demand could be expected to exceed the supply by about 1975. A look at individual habitat classes shows that reservoirs and ponds are currently in short supply. The same is true of fishery habitat classes 2 through 8. Therefore, the conclusion is rather obvious that abatement of pollution in these habitat classes will effect a benefit by increasing a type of fishing for which there will be an unsatisfied demand.

For classes 9 and 10, the resource supply exceeds the current demand. Among these classes, catfish streams will not be completely utilized until about 2010, and carp streams may not be completely utilized during the analysis period. Theoretically, pollution abatement is not as critical with these classes. However, the overall balance of fresh-water resource supply to expected demand indicates a total shortage of fishing opportunity in the future. Based on these comparisons it seems imperative that pollution should be controlled wherever found in these habitat types.

Classes 11 and 12 present a much more complicated picture owing to the use of these waters by both commercial and sport fishing interests. Projecting future demand for commercial fishery products is difficult because of several interacting factors. Therefore, this type projection must be done on a general basis. One of the complicating factors is that although per capita consumption of commercial fishery products has remained fairly constant for a number of years, demand for individual species has varied greatly. Moreover, sport fishing is taking an increasingly greater portion of the harvest from the available standing crop. Lastly, over half the current consumption of finfish and shellfish is currently composed of foreign imports and these imports will continue to comprise a significant portion of the country's total consumption.

The Bureau of Commercial Fisheries provided commercial fishery demand data for the entire United States, which did not separate the portion of domestic and imported production. For purposes of this study, it was assumed that the current ratio of domestic-imported production would remain constant in future years, and that the study area's current contribution to total United States production would remain the same. Therefore, projected commercial fishery demand (tables 41 through 43), when added to projected sport fishing demand (table 40), indicates that demand for fishery resources in class 11 waters (tidal) will not exceed sustained harvest capability under present levels of pollution until the mid-1980's (table 44). By contrast, supplies in class 12 waters (salt) are, at the present time, in approximate balance with demand.

Based on available data and experience of fishery experts, it has been concluded that commercial fishing for industrial fishes (primarily menhaden) is at, or surpassing, maximum sustained harvest capability levels (table 44). Therefore, industrial fish harvest cannot be expected to appreciably increase in the future.

On the whole, edible finfish harvest has not yet reached its maximum sustained harvest capability level except for certain species (table 44). Based on catch records and professional opinions, it appears that American shad are currently harvested to the maximum level. Some question also exists as to whether striped bass may be approaching the same maximum harvest levels. Other species vary, but in general, can stand higher catch rates. This is particularly true of alewives, white perch, yellow perch, catfishes, swellfish, carp, and to a lesser degree, trouts, butterfish, flounder, bluefish, spot, and other species.

It is estimated that commercial and sport finfish harvest can be increased a little over 55 million pounds before the maximum sustained harvest level is reached (table D).

The average annual sustained harvest capability for shellfish (oysters, clams, and crabs) indicates that current harvest levels exceed the productive capacity of the habitat (table 44). However, this is misleading since demand must be compared to supply for each species in order to get a clearer picture. For example, blue crabs may be currently overharvested during low population cycles, and hard clams may be nearing their sustained harvest level, but soft clam production has not reached a sustained harvest level. Both of these species are maintained by natural populations. By contrast, oysters, which are subject to intensive management practices, can undergo a significant production increase if a variety of economic, sociopolitical, and biological problems are remedied.

SUMMARY AND CONCLUSIONS

Summaries drawn from this study include the following:

1. Fish habitat in the study area amounts to approximately 432,000 acres of fresh water and 2,762,000 acres of salt water for a total of 3,194,000 surface acres (table 1).

2. About 86 percent of the water in the study area is salt water and the remaining 14 percent is comprised of all classes of fresh water. Approximately 95 percent of the area's current fishery capability is derived from salt

TABLE D

ESTIMATED POSSIBLE INCREASE IN FINFISH CATCH--CLASSES 11 AND 12 WATERS TOTAL EXPECTED INCREASED ANNUAL HARVEST (MILLION POUNDS)

Species	Commercial Catch	Sport Catch	Total Catch
Menhaden	None	--	None
Alewives	9.0	1.0	10.0
American Shad	None	None	None
Striped Bass	1.0	4.0	5.0
Spot	Negl.	1.0	1.0
Croaker	Negl.	Negl.	Negl.
Trouts	--	2.0	2.0
Flounders	Negl.	1.0	1.0
Bluefish	Negl.	1.0	1.0
Butterfish	2.0	--	2.0
Swellfish	8.0	--	8.0
White Perch	1.0	9.0	10.0
Yellow Perch	--	1.0	1.0
Catfishes	0.5	1.5	2.0
Carp	--	2.0	2.0
Suckers	--	1.0	1.0
Eels	0.5	0.5	1.0
Sunfishes	--	1.0	1.0
*Others	1.0	5.0	6.0
Totals	23.0±	32.0±	55.0±

* Includes tautog, channel bass, drum, mullet, cobia, bonita, groupers, etc.

water, 4 percent from fresh-water tidal streams and bays, and 1 percent from smaller streams and impoundments (table 1).

3. This fish habitat, under existing pollution levels, is capable of producing a sustained average annual harvest of about 368,464,000 pounds of finfish and 105,000,000 pounds of shellfish (not including advanced oyster culture), or a total of 473,464,000 pounds of fish (table 1).

4. The 1960-1964 average annual commercial fishery harvest from the study area included 288,740,000 pounds of finfish and 107,584,000 pounds of shellfish for a total of 396,324,000 pounds (table 10).

5. Wetland wildlife habitat occupied approximately 614,000 acres of the study area in the mid-1950's (table 13). Since that time, losses resulting from drainage, land fill, highway construction, and similar developments have reduced wetland habitat to a current area of about 558,000 acres or less.

6. Publicly owned facilities relating to fish and wetland wildlife include 16 fish hatcheries, 74 boat launching ramps, 130 impoundments encompassing 25,300 acres of water open to public fishing, and 30 wetland wildlife developments totaling 94,400 acres (table 18).

7. Pollution affects approximately 432,000 acres of finfish habitat and 42,000 acres of shellfish grounds for a total of 463,000 surface acres (adjusted for overlap), or about 14 percent of the study area's fish habitat (table 23).

8. Average annual losses from significant pollution effects on 101,000 acres of finfish habitat and 42,000 acres of shellfish habitat amount to $1,861,000 and $1,090,000, respectively, or a total fishery loss of $2,951,000. No losses were assigned to 331,000 acres of negligibly polluted finfish habitat.

9. The number of sport fishermen is projected to increase from 812,000 in 1960 to 1,096,000 in 1980, 1,508,000 in 2000, and 2,146,000 in 2020 (table 39).

10. Sport fishing man-days are predicted to increase from 17,540,000 in 1960 to 23,577,000 in 1980, 32,339,000 in 2000, and 45,938,000 in 2020 (table 39).

11. Distribution of sport fisherman use to habitat types is expected to continue along past trends (table 40).

12. During the period 1960-1964, the study area provided about 6.7 percent, or 288,740,000 pounds, of the total U.S. commercial finfish harvest and 29.9 percent, or 107,098,000 pounds, of the shellfish (oyster, clams, and crabs) (table 41).

13. Projected demand for commercial finfish harvested from the study area will increase to 466,421,000 pounds in 1980, 664,735,000 pounds in 2000, and 986,779,000 pounds in 2020 (table 42).

14. Projected demand for commercial shellfish from the study area will increase to 133,877,000 pounds in 1980, 222,764,000 pounds in 2000, and 436,960,000 pounds in 2020 (table 43).

15. Projected demand for both sport and commercial fishery harvest presently, or in the near future, will exceed the average annual sustained harvest capability from most individual habitat classes under existing pollution levels (table 44).

Conclusion that can be drawn from a gross analysis of the type attempted in this study are obviously limited. However, for the purpose of developing a sound comprehensive program for water pollution control, it is essential that overall pollution effects on fish and wildlife resources be identified and evaluated. It can be logically concluded that water pollution is a significant deterrent to fishery production and utilization in the study area. However, to place pollution in its proper prospective it should be noted that, of the total fish habitat (3,194,000 acres), approximately 10.4 percent (331,000 acres) falls within the negligible category to which no fishery losses were assigned. The intent of this category was primarily to identify future problem areas.

In summary, it is the position of this Bureau that the ultimate goal of the clean waters program of this Nation should be to maintain or achieve such quality in every stream, lake, estuary, bay, or other water as will support the full potential of the water for production and human use of aquatic life and water-dependent wildlife resources. We support the criteria recommended by the National Technical Advisory Committee on Water Quality Requirements for Fishes, Other Aquatic Life and Wildlife and recommend that these criteria be used as guidelines in any clean waters program for the water areas identified in this report. In other areas of the Chesapeake Bay drainages, this Bureau is in full support of the Secretary's anti-degradation statement as a basic policy of the Federal Water Pollution Control Act. This policy states that in waters whose existing quality is better than the standards the respective States are required to set, these waters will be maintained at their existing high quality.

APPENDIX

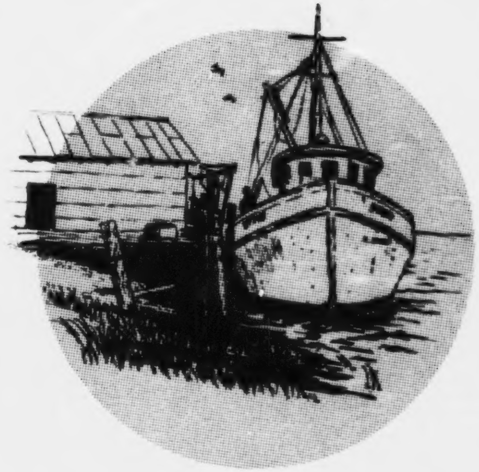
FISHERY RESOURCES

WILDLIFE RESOURCES

PUBLICLY OWNED FACILITIES

POLLUTION EFFECTS

SUPPLY vs. DEMAND



FISHERY RESOURCES

(TABLES 1-12 and PLATES 1-8)

TABLE 1

SUMMARY OF FISH HABITAT AND HARVEST CAPABILITY

CHESAPEAKE BAY AND TRIBUTARIES (EXCEPT SUSQUEHANNA RIVER BASIN)

		FISH HABITAT CLASSES												
		RESERVOIRS R	PONDS P	TROUT FEEDER 2	TROUT 3	SUCKER 4	BASS FEEDER 5	BASS 6	PICKEREL 7	BULLHEAD 8	CATFISH 9	CARP 10	TIDAL 11	SALT WATER 12	TOTAL
Stream Miles		-	-	1,131	575	2,455	1,060	1,717	900	26	293	18	993	911	10,079
Surface Area	Acres	29,359	32,324	1,256	1,376	4,540	4,217	33,395	4,393	319	15,297	213	305,776	2,761,686 5/	3,194,151 5/
	% Total	0.92	1.01	0.04	0.04	0.14	0.13	1.05	0.14	0.01	0.48	0.01	9.57	86.46	100
Average Annual Sustained Harvest Capability (With Existing Pollution)	Pounds	880,770	2,424,300	9,244	17,188	66,520	86,503	939,136	166,260	7,634	746,112	5,001	19,885,347 2/	448,230,219 1&3/	473,464,234 1&4/
	% Total	0.186	0.512	0.002	0.004	0.014	0.018	0.198	0.035	0.002	0.158	0.001	4.200	94.670	100

1/ Includes 105,000,000 pounds of shellfish production.
2/ Represents 8,530,814 pounds for sport fishing and 11,354,533 pounds for commercial fishing.
3/ Represents 41,187,626 pounds for sport fishing and 302,042,593 pounds for commercial fishing.
4/ Represents 55,067,108 pounds for sport fishing and 313,397,126 pounds for commercial fishing.
5/ Includes 214,433 acres seaside.

TABLE 2

SUMMARY OF FISH HABITAT AND HARVEST CAPABILITY

CHESAPEAKE BAY AREA

		FISH HABITAT CLASSES													
		RESERVOIRS R	PONDS P	TROUT FEEDER 2	TROUT 3	SUCKER 4	BASS FEEDER 5	BASS 6	PICKEREL 7	BULLHEAD 8	CATFISH 9	CARP 10	TIDAL 11	SALT WATER 12	TOTAL
Stream Miles		-	-	1	-	210	123	49	73	-	21	16	381	483	1,357
Surface Area	Acres	10,319	5,375	1	-	364	508	229	327	-	201	206	118,254	2,328,302[5]	2,464,086[5]
	% Total	0.42	0.22	0.00	-	0.01	0.02	0.01	0.01	-	0.01	0.01	4.80	94.49	100
Average Annual Sustained Harvest Capability (With Existing Pollution)	Pounds	309,570	403,125	8	-	5,415	9,586	6,312	12,285	-	5,025	4,738	8,268,533[2]	371,249,094[1&3]	380,273,691[1&4]
	% Total	0.082	0.106	0.000	-	0.001	0.003	0.002	0.003	-	0.001	0.001	2.175	97.627	100

[1] Includes 82,005,000 pounds of shellfish production.
[2] Represents 3,547,201 pounds for sport fishing and 4,721,332 pounds for commercial fishing.
[3] Represents 34,709,291 pounds for sport fishing and 254,534,803 pounds for commercial fishing.
[4] Represents 39,012,556 pounds for sport fishing and 259,256,135 pounds for commercial fishing.
[5] Includes 214,433 acres seaside.

TABLE 9

SUMMARY OF FISH HABITAT AND HARVEST CAPABILITY

JAMES RIVER BASIN

		FISH HABITAT CLASSES												
		RESERVOIRS R	PONDS P	TROUT FEEDER 2	TROUT 3	SUCKER 4	BASS FEEDER 5	BASS 6	PICKEREL 7	BULLHEAD 8	CATFISH 9	CARP 10	TIDAL 11	SALT WATER 12	TOTAL
Stream Miles		-	-	220	236	735	[illegible]	75	139	-	80	-	826	70	2,626
Surface Area	Acres	7.094	10,714	207	635	1,154	276	18,293	1,907	-	1,013	-	64,340	72,588	178,221
	% Total	3.98	6.01	0.12	0.36	0.65	0.15	10.26	1.07	-	0.57	-	36.10	40.73	100
Average Annual Sustained Harvest Capability (With Existing Pollution)	Pounds	212,820	803,550	1.656	8,890	16,886	6,072	497,977	72,266	-	48,400	-	3,426,290 2/	12,643,500 1&3/	17.738,307 1&4/
	% Total	1.200	4.530	0.009	0.050	0.095	0.034	2.807	0.407	-	0.273	-	19.315	71.280	100

1/ Includes 3,570,000 pounds of shellfish production.
2/ Represents 1,469,878 pounds for sport fishing and 1,956,412 pounds for commercial fishing.
3/ Represents 1,088,820 pounds for sport fishing and 7,984,680 pounds for commercial fishing.
4/ Represents 4,227,215 pounds for sport fishing and 9,941,092 pounds for commercial fishing.

TABLE 4

SUMMARY OF FISH HABITAT AND HARVEST CAPABILITY

RAPPAHANNOCK-YORK RIVER BASINS

		FISH HABITAT CLASSES												
		RESERVOIRS R	PONDS P	TROUT FEEDER 2	TROUT 3	SUCKER 4	BASS FEEDER 5	BASS 6	PICKEREL 7	BULLHEAD 8	CATFISH 9	CARP 10	TIDAL 11	SALT WATER 12	TOTAL
Stream Miles		-	-	14	70	452	204	122	603	-	41	-	193	201	1,900
Surface Area	Acres	2,946	7,202	11	102	630	723	1,842	1,838	-	385	-	24,452	149,128	189,259
	% Total	1.56	3.81	0.01	0.05	0.33	0.38	0.97	0.97	-	0.20	-	12.92	78.80	100
Average Annual Sustained Harvest Capability (With Existing Pollution)	Pounds	88,380	540,150	88	1,428	9,450	15,906	55,260	69,844	-	19,250	-	1,690,814 2/	29,771,000 1&3/	32,261,570 1&4/
	% Total	0.274	1.674	0.000	0.004	0.029	0.049	0.171	0.217	-	0.060	-	5.240	92.282	100

1/ Includes 11,130,000 pounds of shellfish production.
2/ Represents 725,359 pounds for sport fishing and 965,455 pounds for commercial fishing.
3/ Represents 2,236,920 pounds for sport fishing and 16,404,080 pounds for commercial fishing.
4/ Represents 3,762,035 pounds for sport fishing and 17,369,535 pounds for commercial fishing.

TABLE 5

SUMMARY OF FISH HABITAT AND HARVEST CAPABILITY

POTOMAC RIVER BASIN

		FISH HABITAT CLASSES													
		RESERVOIRS R	PONDS P	TROUT FEEDER 2	TROUT 3	SUCKER 4	BASS FEEDER 5	BASS 6	PICKEREL 7	BULLHEAD 8	CATFISH 9	CARP 10	TIDAL 11	SALT WATER 12	TOTAL
Stream Miles		-	-	896	269	1,058	595	764	85	26	151	2	193	157	4,196
Surface Area	Acres	9,000	9,033	1,037	639	2,392	2,710	13,031	321	319	13,698	7	98,730	211,668	362,585
	% Total	2.48	2.49	0.28	0.18	0.66	0.75	3.59	0.09	0.09	3.78	0.00	27.23	58.38	100
Average Annual Sustained Harvest Capability (With Existing Pollution)	Pounds	270,000	677,475	7,492	6,870	34,769	54,939	379,587	11,865	7,634	673,437	263	6,499,710 2/	34,566,625 1&3/	43,190,666 1&4/
	% Total	0.625	1.569	0.017	0.016	0.081	0.127	0.879	0.027	0.018	1.559	0.000	15.049	80.033	100

1/ Includes 8,295,000 pounds of shellfish production.
2/ Represents 2,788,376 pounds for sport fishing and 3,711,334 pounds for commercial fishing.
3/ Represents 3,152,595 pounds for sport fishing and 23,119,030 pounds for commercial fishing.
4/ Represents 8,065,002 pounds for sport fishing and 26,830,364 pounds for commercial fishing.

TABLE 6

FISH HABITAT

CHESAPEAKE BAY AREA

WATER AREA	RIVER SYSTEM INDEX CODE 1/	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT 2/	CURRENT 3/ SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Chesapeake Bay	02-00-000	12	0.0-148.0	1,864,039.0	Yes*	U	932,019,500	233,004,875
Chesapeake Bay	02-00-000	11	148.0-172.0	67,728.0		U	33,864,000	8,466,000
Susquehanna River	02-12-001	(Not included in this study)						
Patuxent River	02-13-047	12	0.0- 45.0	30,076.0	Yes*	U	15,038,000	3,759,500
Patuxent River	02-13-047	11	45.0- 56.9	180.0	Yes #	M	54,000	9,450
Patuxent River	02-13-047	9	56.9- 77.6	201.0	Yes #	U	20,100	5,025
Patuxent River	02-13-047	5	77.6- 79.2	5.0		O	550	110
Rocky Gorge Reservoir		R	79.2- 87.8	810.0				
Patuxent River	02-13-047	5	87.8- 93.7	32.9		O	3,619	724
Tridelphia Reservoir		R	93.7- 98.5	800.0				
Patuxent River	02-13-047	4	98.5-105.0	12.6		U	945	189
Lyons Creek	2-001040	11	0.0- 1.0	1.0		U	400	70
Mataponi Creek	2-001070	11	0.0- 0.5	1.0		U	400	70
Mataponi Creek	2-001070	4	0.5- 4.2	3.6		O	270	54
Western Branch	2-001090	11	0.0 - 0.5	1.6		O	640	112
Western Branch	2-001090	4	0.5 - 4.3	12.0		O	900	180
Collington Branch	2-001090	4	4.3 - 9.5	10.0		U	750	150
Charles Branch	3-00010	4	0.0 - 3.0	4.0		U	300	60
Western Branch	3-00030	4	0.0 - 8.0	15.5		O	1,163	233
Cabin Branch	4-0030	4	0.0 - 2.0	1.9		U	143	29

Table 6, page 2

Northeast Branch	4-0180	4	0.0 - 0.5	0.5		U	38	8
Little Patuxent River	2-001240	5	0.0 - 17.6	105.4	Yes #	U	5,797	1,160
Little Patuxent River	2-001240	4	17.6 - 28.5	21.1		U	1,583	317
Middle Patuxent River	3-00170	5	0.0 - 12.1	35.5		U	3,905	781
Middle Patuxent River	3-00170	4	12.1 - 18.5	12.4		U	930	186
Hawlins River	2-001430	4	0.0 - 3.4	4.4		U	330	66
Cattail Creek	2-001500	4	0.0 - 6.8	13.2		U	990	198
South River	02-13-149	12	0.0 - 9.7	5,106.0	Yes*	U	2,553,000	638,250
Bacon Ridge Branch	02-13-149	11	9.7 - 10.8	1.3		O	520	91
North River	2-000170	11	0.0 - 0.7	1.0		O	400	70
Severn River	02-13-155	12	0.0 - 12.0	6,164.0	Yes*	U	3,082,000	770,500
Severn River	02-13-155	11	12.0 - 13.0	30.0	Yes #	U	9,000	1,575
Severn Run	02-13-155	7	13.0 - 14.5	2.9	Yes #	U	326	83
Severn Run	02-13-155	4	14.5 - 22.0	7.3	Yes #	O	454	91
Macothy River	02-13-196	12	0.0 - 7.7	5,480.0	Yes*	U	2,740,000	685,000
Patapsco River	02-13-223	12	0.0 - 11.0	17,700.0	Yes* #	U	2,212,500	553,125
Patapsco River	02-13-223	11	11.0 - 17.3	100.0	Yes #	U	10,000	1,750
Patapsco River	02-13-223	10	7.3 - 32.9	206.2	Yes #	U	18,950	4,738
Patapsco River	02-13-223	6	32.9 - 36.4	25.5		U	3,825	765
North Branch Patapsco River	02-13-223	6	36.4 - 39.7	24.0		U	3,600	720
Liberty Reservoir		R	39.7 - 53.3	3,100.0				

1/ "A River-Mile Indexing System for Computer Application in Storing and Retrieving Data," Department of Health, Education and Welfare, Charlottesville, Virginia.

2/ # indicates finfish pollution; see table 29 for details. * indicates shellfish pollution; see table 35 for details.

3/ U = Underfished. M = Maximum fished. O = Overfished.

Table 6, page 3

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
North Branch Patapsco River	02-13-223	6	53.3 - 56.4	9.8		U	1,470	294
North Branch Patapsco River	02-13-223	5	56.4 - 62.2	18.3	Yes #	0	1,510	302
North Branch Patapsco River	02-13-223	4	62.2 - 63.9	1.6		0	120	24
Curtis Creek	2-000070	12	0.0 - 6.2	146.0		U	73,000	18,250
Furnace Creek	3-00060	12	0.0 - 1.8	17.0		U	8,500	2,125
Furnace Creek	3-00060	11	1.8 - 2.3	0.5		0	200	35
Northwest Harbor	2-000100	12	0.0 - 2.4	685.0		U	342,500	85,625
Jones Falls	2-000100	1	2.4 - 10.9	-				
Lake Roland		R	10.9 - 12.5	80.0				
Jones Falls	2-000100	4	12.5 - 18.8	5.1		0	383	77
South Branch Patapsco River	2-000470	6	0.0 - 5.5	17.3	Yes #	U	2,595	519
South Branch Patapsco River	2-000470	5	5.5 - 11.4	11.4	Yes #	U	1,254	251
Piney Run	3-00020	5	0.0 - 5.8	18.3		U	2,013	403
Piney Run	3-00020	4	5.8 - 11.5	5.5		0	413	83
Morgan Run	2-000530	5	0.0 - 3.1	9.8		U	1,078	216
Morgan Run	2-000530	4	3.1 - 5.1	1.9		U	143	29
Beaver Run	2-000590	4	0.0 - 6.0	10.6		0	795	159
Back River	02-13-227	12	0.0 - 7.2	4,297.0	Yes #	U	1,611,375	402,844
Middle River	02-13-230	12	0.0 - 4.4	2,430.0		U	1,215,000	303,750
Gunpowder River	02-13-232	11	0.0 - 8.5	10,960.0		U	4,384,000	767,200

Table 6, page 4

Gunpowder Falls	02-13-232	11	8.5 - 12.1	21.8		O	8,720	1,526
Gunpowder Falls	02-13-232	5	12.1 - 21.7	41.9		U	4,609	922
Lock Raven Reservoir		R	21.7 - 32.8	2,400.0				
Gunpowder Falls	02-13-232	5	32.8 - 47.3	105.4		U	11,594	2,319
Pretty Boy Reservoir		R	47.3 - 53.3	1,500.0				
Gunpowder Falls	02-13-232	4	53.3 - 59.5	11.8		M	885	177
Little Gunpowder Falls	2-000140	11	0.0 - 2.5	40.4	Yes #	U	14,560	2,548
Little Gunpowder Falls	2-000140	6	2.5 - 12.2	42.3	Yes #	U	5,520	1,104
Little Gunpowder Falls	2-000140	5	12.2 - 17.3	9.9		U	1,089	218
Little Gunpowder Falls	2-000140	4	17.3 - 20.7	3.3		U	248	50
Long Green Creek	2-000280	4	0.0 - 3.5	6.8		U	510	102
Western Run	2-000510	5	0.0 - 4.5	14.2		O	1,562	312
Western Run	3-00070	4	4.5 - 7.9	6.6		O	495	99
Piney Run	3-00070	4	7.9 - 11.4	3.4		U	255	51
Delaware Run	4-0090	4	0.0 - 1.3	1.3		U	98	20
Carrol Branch	2-000540	4	0.0 - 0.8	0.8		U	60	12
Little Falls	2-000600	5	0.0 - 7.1	22.4	Yes #	O	2,464	493
Little Falls	2-000600	4	7.1 - 12.	4.8		U	360	72
First Mine Branch	3-00040	4	0.0 - 1.8	1.7		O	128	26
Second Mine Branch	3-00060	4	0.0 - 2.0	1.9		U	143	29
Third Mine Branch	3-00080	4	0.0 - 1.5	1.5		U	113	23
Fourth Mine Branch	3-00100	4	0.0 - 1.2	1.2		U	90	18
Bee Tree Run	3-00120	4	0.0 - 3.5	6.8		O	510	102
Georges Run	2-000670	R	0.0 - 3.3	-				
Georges Run	3-00050	4	0.0 - 4.5	4.4		O	143	29

Table 6, page 5

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Grave Run	2-000690	4	0.0 - 2.0	1.9		U	25	4
Silver Run	2-000720	2	0.0 - 0.8	0.5		U	25	4
Bush River	02-13-237	11	0.0 - 10.4	7,223.0		U	2,889,200	505,610
Otter Creek	2-000070	11	0.0 - 1.9	620.0		U	248,000	43,400
Winters Run	2-000070	11	1.9 - 3.8	8.3		O	3,320	581
Winters Run	2-000070	6	3.8 - 8.4	20.1		U	3,015	603
Atkinson Reservoir		R	8.4 - 9.8	90.0				
Winters Run	2-000070	5	9.8 - 14.5	20.5		U	2,255	451
Winters Run	2-000070	4	14.5 - 18.4	7.8		O	585	117
East Branch Winters Run	2-000070	4	18.4 - 19.7	1.3		U	98	20
Bynum Run	2-000090	11	0.0 - 1.0	11.0		U	4,400	770
Bynum Run	2-000090	4	1.0 - 7.6	6.4	Yes #	U	360	72
James Run	3-00020	4	0.0 - 2.4	2.3	Yes #	U	163	33
Romney Creek	02-13-239	11	0.0 - 5.2	1,120.0		U	448,000	78,400
Swan Creek	02-13-240	11	0.0 - 3.8	431.3		U	172,520	30,191
Principid Creek	02-13-260	11	0.0 - 1.3	7.2		U	2,880	504
Principid Creek	02-13-260	5	1.3 - 6.6	10.3		O	1,133	227
Principid Creek	02-13-260	4	6.6 - 9.6	2.9		U	218	44
Stony Run	02-13-267	11	0.0 - 0.9	1.7		O	680	119
Stony Run	02-13-267	4	0.9 - 3.0	2.0		U	150	30
Little Northeast Creek	02-13-268	11	0.0 - 0.7	8.5		O	3,400	595

Table 6, page 6

Little Northeast Creek	02-13-268	6	0.7- 3.5	16.3	Yes #	0	1,920	384
Little Northeast Creek	02-13-268	5	3.5- 9.7	12.0		U	1,320	264
Little Northeast Creek	02-13-268	4	9.7-12.4	2.6		U	195	39
Northeast Creek	2-000030	6	0.0- 3.0	9.5		U	1,425	285
Northeast Creek	2-000030	5	3.0- 4.5	3.6		U	396	79
Northeast Creek	2-000030	4	4.5-10.4	11.4		U	855	171
Elk River	02-13-281	11	0.0-16.9	8,281.6		U	3,312,640	579,712
Big Elk Creek	02-13-281	6	16.9-26.1	45.4		U	6,810	1,362
Bohemia River	2-000040	11	0.0- 4.1	1,930.5		U	772,200	135,135
Great Bohemia Creek	2-000040	11	4.1- 7.9	311.4		U	124,560	21,798
Little Bohemia Creek	3-00060	11	0.0- 2.8	168.8		U	67,520	11,816
Back Creek	2-000140	11	0.0- 6.8	498.2		U	199,280	34,874
Long Branch	3-00030	11	0.0- 1.0	62.3		U	24,920	4,361
Little Elk Creek	2-000250	11	0.0- 1.6	7.9		U	3,160	553
Little Elk Creek	2-000250	6	1.6- 6.0	19.2	Yes #	U	1,440	288
Little Elk Creek	2-000250	5	6.0-13.1	31.0	Yes #	U	1,815	352
Sassafras River	02-13-289	11	0.0-15.0	23,533.0		U	2,952,000	516,600
Chester River	02-13-336	12	0.0-30.0	30,824.0	Yes*	U	15,412,000	3,853,000
Chester River	02-13-336	11	30.0-43.0	1,525.7		U	610,280	106,799
Cypress Branch	02-13-336	4	43.0-43.6	0.6		0	45	9
Corsica River	2-000120	12	0.0 - 5.8	1,245.0	Yes*	U	622,500	155,625
Three Bridle Branch	2-000120	7	5.8 - 6.4	1.2		U	180	46
Three Bridle Branch	2-000120	4	6.4 - 9.2	1.4		U	105	21
Old Mill Stream Branch	3-00100	11	0.0 - 1.3	2.5		U	1,000	175

Table 6, page 7

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Old Mill Stream Branch	3-00100	4	1.3 - 2.5	1.2		U	90	18
Southeast Creek	2-000220	11	0.0 - 4.0	467.0		U	186,800	32,690
Island Creek	3-00020	11	0.0 - 3.7	124.5		U	49,800	8,715
Island Creek	3-00020	4	3.7 - 5.3	1.6		U	120	24
Granny Finley Branch	4-0050	11	0.0 - 1.1	6.0		U	2,400	420
Granny Finley Branch	4-0050	4	1.1 - 2.5	1.4		U	105	21
Radcliff Creek	2-000270	11	0.0 - 1.0	3.2		U	1,280	224
Radcliff Creek	2-000270		1.0 - 1.9	2.8		U	420	106
Morgan Creek	2-000310	11	0.0 - 4.8	200.0		U	80,000	14,000
Morgan Creek	2-000310	4	4.8 - 7.3	3.2		U	240	48
Forman Branch	2-000320	11	0.0 - 1.4	30.0		U	12,000	2,100
Forman Branch	2-000320	4	1.4 - 2.4	1.0		U	75	15
unnamed stream	2-000350	11	0.0 - 0.5	1.0		U	400	70
unnamed stream	2-000370	11	0.0 - 0.7	1.4		U	560	98
Red Lion Branch	2-000420	11	0.0 - 1.1	60.0		U	24,000	4,200
Red Lion Branch	2-000420	7	1.1 - 2.2	2.1		U	315	80
Unicorn Branch	2-000460	11	0.0 - 0.7	3.0		U	1,200	210
Unicorn Lake		R	0.7 - 1.3	45.0				
Unicorn Branch	2-000460	7	1.3 - 3.7	4.7		U	705	179
Mills Branch	2-000470	4	0.0 - 2.2	4.3		U	323	65
Andover Branch	2-000480	7	0.0 - 3.7	7.4		U	1,110	281
Andover Branch	2-000480	4	3.7 - 5.9	2.1		U	158	32
Wye River	02-13-401	12	0.0 - 11.3	3,000.0		0	1,500,000	375,000

Table 6, page 8

Wye East River	2-00020	12	0.0 - 11.0	2,685.0		O	1,342,500	335,625
Wye Creek	3-00080	12	0.0 - 2.0	200.0		O	100,000	25,000
Mill Creek	4-0050	12	0.0 - 0.9	31.0		O	15,500	3,875
Mill Creek	4-0050	4	0.9 - 2.9	1.9		U	143	29
Miles River	02-13-415	12	0.0 - 10.7	5,168.0	Yes*	M	2,584,000	646,000
Potts Mill Creek	02-13-415	11	10.7 - 12.8	30.0		U	12,000	2,100
Choptank River	02-13-451	12	0.0 - 30.8	65,134.0	Yes*	U	32,567,000	8,141,750
Choptank River	02-13-451	11	30.8 - 62.5	2,801.8		U	1,120,720	196,126
Choptank River	02-13-451	7	62.5 - 67.4	21.4		U	3,210	813
Hunting Creek	2-000400	11	0.0 - 4.5	186.8		U	74,720	13,076
Kings Creek	2-000710	11	0.0 - 2.4	26.2		U	10,480	1,834
Kings Creek	2-000710	7	2.4 - 4.2	7.9		U	1,185	300
Beaverdam Creek	3-00020	11	0.0 - 1.1	12.0		U	4,800	840
Beaverdam Creek	3-00020	7	1.1 - 2.6	1.5		U	225	51
Hog Creek	2-000760	11	0.0 - 1.1	10.0		U	4,000	700
Tuckahoe Creek	2-000850	11	0.0 - 17.9	721.4		U	288,560	50,498
Mason Branch	2-000850	7	17.9 - 20.8	17.6		U	2,640	669
Mason Branch	2-000850	4	20.8 - 27.1	38.2		U	2,865	573
Moores Mill Creek	3-00170	11	0.0 - 0.6	0.6	Yes #		0	0
Norwich Creek	3-00190	4	0.0 - 1.4	2.7		U	203	41
Grouse Mill Creek	3-00210	7	0.0 - 0.6	1.9		O	285	72
Blockston Branch	3-00250	4	0.0 - 1.0	1.0		U	75	15
German Branch	3-00290	4	0.0 - 5.0	9.7		U	728	146
Fowling Creek	2-000880	11	0.0 - 1.4	40.0		U	16,000	2,800
Watts Creek	2-000960	11	0.0 - 2.4	62.0		U	24,800	4,340

Table 6, page 9

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Chapel Branch	2-001040	11	0.0 - 1.8	3.5		O	1,400	245
Gravelly Branch	2-001180	7	0.0 - 1.2	1.2		O	180	46
Little Choptank River	02-13-468	12	0.0 - 8.5	10,461.0		U	5,230,500	1,307,625
Nanticoke River	02-13-570	12	0.0 - 31.6	10,460.0	Yes*	U	7,663,000	1,915,750
Nanticoke River	02-13-570	11	31.6 - 41.5	740.0		U	296,000	51,800
Deep Creek	02-13-570	11	41.5 - 46.7	210.0		U	84,000	14,700
Fishing Bay	2-000010	12	0.0 - 12.5	19,054.0		U	9,527,000	2,381,750
Transquaking River	2-000010	12	12.5 - 21.2	193.0		O	96,500	24,125
Transquaking River	2-000010	11	21.2 - 32.3	134.5		U	53,800	9,415
Chicamacomico River	3-00160	11	0.0 - 12.5	130.0		U	52,000	9,100
Wicomico River	2-000020	12	0.0 - 14.4	9,278.0	Yes*	U	4,639,000	1,159,750
Wicomico River	2-000020	11	14.4 - 24.7	822.1		U	328,840	57,547
Wicomico River	2-000020	7	24.7 - 27.2	74.7		U	11,205	2,839
Nailers Pond		P	27.2 - 27.4	7.0				
Leonard Pond Run	2-000020	7	27.4 - 29.0	5.0		O	750	190
Leonard Pond		R	29.0 - 29.7	60.0				
Andrews Branch	2-000020	7	29.7 - 30.8	1.1		U	165	42
Monie Bay and Creek	3-00060	12	0.0 - 9.0	2,928.0		U	1,464,000	366,000
Monie Creek	3-00060	11	9.0 - 9.7	1.4		U	560	98
Wicomico Creek	3-00240	12	0.0 - 0.9	25.0		U	12,500	3,125
Wicomico Creek	3-00240	11	0.9 - 6.9	67.3		U	26,920	4,711
Tonytank Creek	3-00600	11	0.0 - 0.9	62.2		U	24,880	4,354
Marshy Hope Creek	2-000350	11	0.0 - 17.1	1,120.0		U	448,000	78,400

Table 6, page 10

Faulkner Branch	3-00330	4	0.0 - 1.3	1.3		M	98	20
Broad Creek	2-000460	11	0.0 - 7.4	299.0		U	119,600	20,930
Records Pond		R	7.4 - 8.8	90.0				
James Branch	2-000460	7	8.8 - 12.8	12.0		U	1,800	456
Mill Creek	3-00080	11	0.0 - 0.1	0.2		O	80	14
Gravelly Fork	2-000530	11	0.0 - 2.8	30.0		U	12,000	2,100
Gravelly Fork	2-000530	7	2.8 - 4.6	13.0		U	1,950	494
Gravelly Branch	2-000530	7	4.6 - 7.1	2.5		M	375	95
Gravelly Fork	3-00030	7	0.0 - 1.6	3.0		U	450	114
Gravelly Fork	3-00030	4	1.6 - 4.6	3.0		U	225	45
Manokin River	02-13-587	12	0.0 - 9.0	4,329.0	Yes*	M	2,164,500	541,125
Manokin River	02-13-587	11	9.0 - 13.5	54.5		U	21,800	3,815
Back Creek	2-000080	12	0.0 - 2.7	370.0		U	185,000	46,250
Back Creek	2-000080	11	2.7 - 6.2	21.2		U	8,480	1,484
Back Creek	2-000080	7	6.2 - 6.9	0.7		U	105	27
Kings Creek	2-000140	11	0.0 - 3.8	24.0		U	9,600	1,680
Jones Creek	2-000180	11	0.0 - 0.5	1.6		M	640	112
Big Annemessex River	02-13-590	12	0.0 - 11.0	6,538.0	Yes*	U	3,269,000	817,250
Pocomoke River	02-13-672	12	0.0 - 8.4	810.0	Yes*	O	405,000	101,250
Pocomoke River	02-13-672	11	8.4 - 34.6	1,001.0		U	400,400	70,070
Pocomoke River	02-13-672	7	34.6 - 46.1	104.5		U	15,675	3,971
Pocomoke River	02-13-672	4	46.1 - 56.5	45.4		U	3,405	681
Wagrum Creek	2-000160	12	0.0 - 8.0	130.0		U	65,000	16,250
Wagrum Creek	2-000160	7	8.0 - 11.0	5.8		U	870	220
Pitts Creek	3-00030	11	0.0 - 0.9	1.7		U	680	119

Table 6, page 11

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Pitts Creek	3-00030	4	0.9 - 2.5	1.6		U	120	24
Dividing Creek	2-000330	11	0.0 - 6.9	30.1		U	12,040	2,107
Dividing Creek	2-000330	7	6.9 - 12.1	5.0		U	750	190
Pilchard Creek	2-000340	11	0.0 - 1.9	1.8		U	720	126
Bachelor Branch	2-000420	11	0.0 - 1.2	2.3		U	920	161
Mattiponi Branch	2-000500	11	0.0 - 1.0	1.0		U	400	70
Corkers Creek	2-000540	11	0.0 - 1.5	6.5		O	2,600	455
Nassawango Creek	2-000630	11	0.0 - 2.8	33.9		O	13,560	2,373
Nassawango Creek	2-000630	7	2.8 - 12.5	18.8	Yes #	U	2,370	600
Patty's Branch	2-000680	11	0.0 - 0.4	0.4		O	160	28
Old Mill Branch	2-000820	7	0.0 - 1.7	2.1		U	315	80
Nine Pin Branch	2-000880	4	0.0 - 1.5	4.7		O	353	71
Campbell Ditch	2-000910	7	0.0 - 1.4	2.7		U	405	103
unnamed pond		P	1.4 - 1.7	2.0				
Campbell Ditch	2-000910	7	1.7 - 3.3	3.1		U	465	118
Gordys Branch	2-001050	7	0.0 - 0.2	0.4		U	60	15
Potomac River	02-14-001	(See table 9)						
Rappahannock-York Rivers	02-15-	(See table 8)						
James River	02-16-007	(See table 7)						

TABLE 7

FISH HABITAT

JAMES RIVER BASIN

WATER AREA	RIVER [1] SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION [2] PRESENT	CURRENT [3] SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.) TOTAL STANDING CROP	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.) TOTAL SUSTAINED HARVEST
James River	02-16-007	12	0.0 - 23.0	60,153.0	Yes *#	U	30,076,500	7,519,125
James River	02-16-007	11	23.0 - 105.2	55,655.0	Yes #	U	16,426,400	2,874,620
James River	02-16-007	6	105.2 - 339.7	14,615.0	Yes #	U	2,007,563	401,513
Jackson River	02-16-007	6	339.7 - 406.0	646.9	Yes #	U	64,410	12,882
Jackson River	02-16-007	3	406.0 - 418.7	64.3		O	4,501	900
Jackson River	02-16-007	2	418.7 - 429.0	9.8		O	490	78
Nansemond River	2-000130	12	0.0 - 20.6	6,999.0	Yes *	U	3,499,500	874,875
Chuckatuck Creek	2-000150	12	0.0 - 6.5	1,619.0		U	809,500	202,375
Pagan River	2-000170	12	0.0 - 9.7	1,924.0	Yes *	U	962,000	240,500
Warwick River	2-000180	12	0.0 - 10.5	1,893.0	Yes *	U	946,500	236,625
Lawnes Creek	2-000190	11	0.0 - 5.1	130.0		U	52,000	9,100
Skiffs Creek	2-000200	11	0.0 - 3.6	137.0		U	54,800	9,590
College Creek	2-000220	11	0.0 - 5.1	173.0		M	69,200	12,110
Half-Way Creek	3-00020	11	0.0 - 2.1	29.0		M	11,600	2,030
Half-Way Creek	4-0020	11	0.0 - 1.3	16.0		U	6,400	1,120
Mill Creek	2-000240	11	0.0 - 1.9	34.0		U	13,600	2,380
Lower Chippokes Creek	2-000250	11	0.0 - 3.1	43.4		U	17,360	3,038

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[1] "A River-Mile Indexing System for Computer Application in Storing and Retrieving Data," Department of Health, Education and Welfare, Charlottesville, Virginia.

[2] # indicates finfish pollution; see table 30 for details. * indicates shellfish pollution; see table 36 for details.

[3] U = Underfished. M = Maximum fished. O = Overfished.

Table 7, page 2

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.) TOTAL STANDING CROP	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.) TOTAL SUSTAINED HARVEST
College Run	2-000270	11	0.0 - 1.2	2.3		U	920	161
Crouch Creek	2-000290	11	0.0 - [illegible]	12.7		U	5,080	889
Grays Creek	2-000310	11	0.0 - 5.3	29.5		O	11,800	2,065
Powhatan Creek	2-000320	11	0.0 - 3.0	27.3		O	10,920	1,911
Powhatan Creek	2-000320	7	3.0 - 6.2	7.8		U	1,170	296
Chickahominy River	2-000360	11	0.0 - 22.5	4,390.0		U	1,756,000	307,300
Chickahominy River	2-000360	7	22.5 - 79.6	1,659.1		U	248,865	63,046
Tomahund Creek	3-00010	11	0.0 - 3.9	47.0		U	18,800	3,290
Gordon Creek	3-00020	11	0.0 - 2.5	101.0		M	40,400	7,070
Nayses Bay		R	2.5 - 2.7	51.0				
Gordon Creek	3-00020	11	2.7 - 5.5	69.0		U	27,600	4,830
Gordon Creek	3-00020	7	5.5 - 5.9	0.5		O	75	19
Morris Creek	3-00030	11	0.0 - 5.6	150.0		U	60,000	10,500
Morris Creek	3-00030	7	5.6 - 7.7	2.4		U	360	91
Nettles Creek	3-00040	11	0.0 - 2.0	42.0		M	16,800	2,940
Blackstump Creek	3-00080	11	0.0 - 3.2	67.0		U	26,800	4,690
Yarmouth Creek	3-00100	11	0.0 - 2.1	38.0		O	15,200	2,660
Yarmouth Creek	3-00100	7	2.1 - 4.2	51.0		U	7,650	1,938
Little Creek	4-0050	7	0.0 - 1.5	19.0		U	2,850	722
Shipyard Creek	3-00120	11	0.0 - 1.5	26.0		O	10,400	1,820
Diascund Creek	3-00220	11	0.0 - 5.0	160.0		O	64,000	11,200
Diascund Lake		R	5.0-11.0	1,500.0				
Diascund Creek	3-00220	7	11.0-13.4	2.9		O	435	110
Beaverdam Creek	4-0160	7	0.0- 1.4	0.9		O	135	34

Table 7, page 3

Warner Swamp	5-0020	7	0.0- 1.4	1.3		O	195	49
Sherman Branch	4-0360	7	0.0-0.7	0.4		O	60	15
Ramey Marsh	3-00520	7	0.0-0.8	1.6		U	240	61
Old Forge Pond		R	0.8-1.6	50.0				
Ramey Marsh	3-00520	7	1.6-5.0	6.6		U	990	251
Schiminoe Creek	3-00580	7	0.0-3.7	2.2		U	330	84
Toe Ink Swamp	3-00720	7	0.0-1.3	4.1		U	615	156
Wood Haven Shores L		P	1.3-1.8	15.0				
Toe Ink Swamp	3-00720	7	1.8-2.9	0.7		O	105	27
White Oak Swamp	3-00830	7	0.0-7.3	9.9	Yes #	U	1,358	344
Upham Brook	3-01410	7	0.0-3.2	6.2	Yes #	O	233	59
North Run	4-0080	4	0.0-5.9	5.3		U	398	80
Chippokes Creek	2-000390	11	0.0-6.2	569.0		U	227,600	39,830
Kennon Creek	2-000420	11	0.0-1.2	21.8		U	8,720	1,526
Tyler Creek	2-000440	11	0.0-0.4	3.0		O	1,200	210
Kittewan Creek	2-000460	11	0.0-2.0	78.0		U	31,200	5,460
Mapsico Creek	3-00020	11	0.0-1.7	16.0		U	6,400	1,120
Wards Creek	2-000510	11	0.0 - 4.1	110.0		U	44,000	7,700
Flowderdew Hundred Creek	2-000530	11	0.0 - 2.5	52.3		U	20,920	3,661
Queens Creek	2-000540	11	0.0 - 2.3	107.0		U	42,800	7,490
Gunns Run	3-00010	11	0.0 - 2.4	20.0		M	8,000	1,400
Herring Creek	2-000580	11	0.0 - 3.7	125.0		U	50,000	8,750
Herring Creek	2-000580	7	3.7 - 5.8	8.1		U	1,215	308
Powell Creek	2-000590	11	0.0 - 4.8	104.0		U	41,600	7,280
Charles Lake		R	0.0 - 0.8	68.0				

Table 7, page 4

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
[illegible]	[illegible]-00640	[illegible]	[illegible] - 1.[illegible]	[illegible]		O	[illegible]	15
[illegible]	-[illegible]	[illegible]	[illegible]	[illegible]		U	12.[illegible]	[illegible],100
[illegible]	-[illegible]	[illegible]	[illegible]	[illegible]	-	O	[illegible]	700
[illegible]	[illegible]	[illegible]	[illegible] - 1[illegible]	[illegible]	Yes [illegible]	[illegible]	312,400	54,670
[illegible]	-[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	U	[illegible]	48,415
[illegible]	-[illegible]071[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible],605	2,961
Swift [illegible]	-[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	5,880
[illegible]		R	[illegible]	[illegible]				
[illegible]	-[illegible]	7	[illegible]	[illegible]		U	[illegible],285	1,592
Swift [illegible] Recreational [illegible]		R	[illegible].1 - [illegible]	[illegible]				
Swift Creek	[illegible]-0008[illegible]	7	22.5 - [illegible]	[illegible]		U	1,455	369
Namozine Creek	3-00650	4	0.0 - 3.[illegible]	[illegible].7		M	278	56
Winterpock Creek	3-00700	4	0.0 - [illegible]	0.5		O	38	8
Winticomack Creek	3-00830	4	0.0 - 3.6	3.5		U	263	53
Deep Creek	3-00930	7	0.0 - 13.5	54.2		U	8,130	2,060
Deep Creek	3-00930	4	13.5 - 21.4	15.3		O	1,148	230
Sweathouse Creek	4-0210	4	0.0 - 3.5	3.4		U	255	51
West Creek	4-0380	4	0.0 - 14.7	19.8		U	1,485	297
Buckskin Creek	5-0040	4	0.0 - 1.0	1.0		U	75	15
Cellar Creek	4-0470	4	0.0 - 7.5	7.3		U	548	110
Bland Creek	5-0090	4	0.0 - 2.5	2.4		U	180	36
Little Creek	4-0520	4	0.0 - 3.3	3.2		U	240	48
Woody Creek	4-0590	4	0.0 - 3.4	3.3		U	248	50

Table 7, page 5

Smacks Creek	3-01190	4	0.0 - 2.2	2.1	U	158	32
Goode Creek	3-01200	4	0.0 - 0.3	0.3	O	23	5
Flat Creek	3-01270	4	0.0 - 28.4	49.5	U	3,713	743
Nibbs Creek	4-0170	4	0.0 - 5.4	5.2	U	390	78
Beaverpond Creek	4-0450	4	0.0 - 2.7	5.2	U	390	78
Little Creek	4-0480	4	0.0 - 2.2	4.3	M	323	65
Butterwood Creek	3-01420	4	0.0 - 3.0	2.9	U	218	44
Fighting Creek	3-01540	4	0.0 - 5.7	5.5	U	413	83
Rocky Ford	4-0060	4	0.0 - 2.4	2.3	U	173	35
Big Guinea Creek	3-02040	4	0.0 - 5.2	5.0	U	375	75
Sandy Creek	3-02090	4	0.0 - 5.5	5.3	U	398	80
Angola Creek	3-02120	4	0.0 - 2.1	2.0	U	150	30
Sandy River	3-02210	4	0.0 - 8.5	12.1	O	908	182
Bush River	4-0020	4	0.0 - 5.9	5.7	U	428	86
Briery Creek	5-0040	4	0.0 - 8.6	8.3	U	623	125
Little Sandy Creek	4-0080	4	0.0 - 2.0	1.9	U	143	29
Buffalo Creek	3-02270	4	0.0 - 13.9	21.9	U	1,643	329
Spring Creek	4-0180	4	0.0 - 2.3	2.2	U	165	33
Vaughans Creek	3-02390	4	0.0 - 7.7	7.5	U	563	113
Pond Creek	3-02500	4	0.0 - 2.0	1.9	U	143	29
Webb Mill Creek	4-0010	4	0.0 - 1.5	1.5	U	113	23
Suanee Creek	3-02510	4	0.0 - 2.8	2.7	U	203	41
Rough Creek	3-02550	4	0.0 - 3.8	3.7	U	278	56
Wolf Creek	3-02620	4	0.0 - 2.1	2.0	U	150	30
North Fork	4-0040	4	0.0 - 1.1	1.1	U	83	17

Table 7, page 6

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
South Fork Appomattox R	3-02[illegible]	[illegible]	0.0 - [illegible]	[illegible]		U	173	35
Turkey Island Creek	[illegible]-000740	11	[illegible] - [illegible]	[illegible]		U	8,000	1,400
Shirley Mill Pond		[illegible]	[illegible] - 4.3	[illegible]				
Turkey Island Creek	2-000740	[illegible]	[illegible] - [illegible]	4.3		U	645	163
Baileys Creek	2-000760	11	0.0 - 0.[illegible]	1[illegible]		O	5,600	980
Fourmile Creek	2-000760	11	0.[illegible] - 1.[illegible]	[illegible]		O	1,200	210
Briggs Pond		P	1.[illegible] - 1.1	[illegible]				
Fourmile Creek	2-000760	7	1.1 - 2.1	[illegible]		O	315	80
Baileys Creek	3-00040	11	0.0 - 1.0	[illegible]		O	1,200	210
Falling Creek	2-000830	11	0.0 - 0.6	[illegible]		U	2,400	420
Falling Creek	2-000830	4	0.6 - 11.6	[illegible]		U	1,875	375
Gregorys Lake		R	11.6 - 12.3	53.0				
Falling Creek	2-000830	4	12.3 - 13.3	1.0		U	75	15
Pocoshock Creek	3-00080	4	0.0 - 2.7	2.6		O	195	39
Bernards Creek	2-001030	4	0.0 - 1.8	1.7		U	128	26
Tuckahoe Creek	2-001040	7	0.0 - 4.2	8.1		U	1,215	308
Tuckahoe Creek	2-001040	4	4.2 - 8.2	3.9		U	293	59
Norwood Creek	2-001070	4	0.0 - 3.7	3.6		M	270	54
Fine Creek	2-001110	4	0.0 - 3.1	3.0		U	225	45
Beaverdam Creek	2-001140	4	0.0 - 1.8	1.7		U	128	26
Big Lickinghole Creek	2-001220	4	0.0 - 3.5	5.6		U	420	84
Little Lickinghole Creek	3-00090	4	0.0 - 6.7	6.5		U	488	98

Table 7, page 7

Solomons Creek	2-001270	4	0.0 - 2.2	2.1	U	158	32
Gaddes Creek	2-001290	4	0.0 - 1.2	1.2	U	90	18
Deep Creek	2-001310	4	0.0 - 1.2	2.4	O	180	36
unnamed lake		P	1.2 - 2.0	10.0			
Deep Creek	2-001310	4	2.0 - 11.5	7.3	O	548	110
Sallee Creek	3-00130	4	0.0 - 3.3	3.2	U	240	48
Muddy Creek	2-001350	7	0.0 - 1.1	2.1	O	315	80
Muddy Creek	2-001350	4	1.1 - 3 4	2.2	U	165	33
Willis River	2-001370	6	0.0 - 30.5	170.0	U	25,500	5,100
Car Ira Pond		R	30.5 - 31.5	50.0			
Willis River	2-001370	6	31.5 - 44.8	36.0	U	5,400	1,080
Willis River	2-001370	4	44.8 - 52.0	7.0	U	525	105
Randolph Creek	3-00300	4	0.0 - 0.2	0.2	U	15	3
Sports Lake		R	0.2 - 1.2	70.0			
Randolph Creek	3-00300	4	1.2 - 4.1	2.5	U	188	38
Hatcher Creek	3-00440	4	0.0 - 2.0	1.9	U	143	29
Little Willis River	3-00710	4	0.0 - 8.2	8.0	M	600	120
Whispering Creek	3-00740	4	0.0 - 7.1	11.9	U	893	179
Byrd Creek	2-001380	5	0.0 - 18.0	36.6	U	4,026	805
Kent Branch	2-001380	5	18.0 - 18.2	0.2	O	22	4
unnamed lake		P	18.2 - 18.4	20.0			
Kent Branch	2-001380	4	18.4 - 23.0	4.8	U	360	72
Little Byrd Creek	3-00080	4	0.0 - 2.1	2.0	U	150	30
unnamed lake		P	2.1 - 2.4	12.0			
Little Byrd Creek	3-00080	4	2.4 . 4.2	1.7	U	128	26

Table 7, page 8

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Little Byrd Creek	3-00260	4	0.0 - 4.5	4.4		U	330	66
Venable Creek	3-00340	4	0.0 - 2.0	1.9		O	143	29
Venable Creek	4-0020	4	0.0 - 1.5	1.5		O	113	23
Rivanna River	2-001400	6	0.0 - 41.0	393.0	Yes #	U	57,488	11,498
South Fork Rivanna River	2-001400	6	41.0 - 53.0	87.0		U	13,050	2,610
Moormans River	2-001400	5	53.0 - 61.5	25.0		U	2,750	550
Moormans River	2-001400	4	61.5 - 66.1	9.1		U	683	137
South Fork Moormans River	2-001400	3	66.1 - 67.6	1.6		O	112	22
Carys Creek	3-00170	4	0.0 - 1.6	1.6		M	120	24
Ballinger Creek	3-00260	4	0.0 - 9.0	8.7		M	653	131
Cunningham Creek	3-00270	4	0.0 - 7.7	11.1		U	833	167
North Fork	4-0060	4	0.0 - 3.4	3.3		U	248	50
South Fork	4-0070	4	0.0 - 1.3	1.3		M	98	20
Stigger Creek	3-00300	4	0.0 - 1.0	1.0		O	75	15
Boston Creek	3-00310	4	0.0 - 3.7	3.6		U	270	54
Mechum Creek	3-00340	4	0.0 - 6.5	12.6		M	945	189
Oliver Creek	4-0020	4	0.0 - 0.8	0.8		O	60	12
Beaverdam Creek	4-0080	4	0.0- 1.6	1.6		M	120	24
Buck Island Creek	3-00430	4	0.0- 2.6	5.0		M	375	75
Moores Creek	3-00650	4	0.0- 5.5	5.3	Yes #	-	0	0
North Fork Rivanna River	3-00720	6	0.0-12.1	38.1	Yes #	U	5,415	1,083
North Fork Rivanna River	3-00720	4	12.1-16.1	7.8		M	585	117

Table 7, page 9

Priddy Creek	4-0140	4	0.0- 1.5	1.5		M	113	23
Swift Run	4-0280	4	0.0- 6.4	12.4		U	930	186
Swift Run	4-0280	3	6.4- 7.9	1.5		O	105	21
Lynch River	4-0370	4	0.0- 6.0	11.6		M	870	174
Lynch River	4-0370	3	6.0- 8.7	2.6		O	182	36
Buck Mountain Creek	3-00860	4	0.0- 1.9	3.7		M	278	56
Mechum River	3-00870	4	0.0- 9.6	18.6	Yes #	O	349	70
North Fork Moormans River	3-01060	3	0.0- 4.0	3.9		O	273	55
Bear Garden Creek	2-001450	4	0.0- 3.8	3.7		U	278	56
Slate River	2-001470	6	0.0-19.1	71.0		U	10,650	2,130
Slate River	2-001470	5	19.1-30.1	21.0		U	2,310	462
Slate River	2-001470	4	30.1-35.9	5.6		U	420	84
Hunts Creek	3-00010	4	0.0- 8.0	7.8		U	585	117
Sharps Creek	3-00140	4	0.0- 4.4	4.3		U	323	65
Walton Fork	3-00340	4	0.0- 5.1	4.9		U	368	74
North River	3-00500	4	0.0 - 3.6	3.5		M	263	53
Horsepen Creek	3-00570	4	0.0 - 1.4	1.4		M	105	21
Grease Creek	3-00640	4	0.0 - 4.7	4.6		U	345	69
Cocke Creek	2-001480	4	0.0 - 1.2	1.2		O	90	18
Bremo Creek	2-001500	4	0.0 - 2.6	2.5		U	188	38
Hardware River	2-001540	6	0.0 - 11.9	42.0		U	6,300	1,260
Hardware River	2-001540	4	11.9 - 27.3	30.0	Yes #	U	1,688	338
South Fork Hardware River	3-00530	4	0.0 - 7.8	7.6		U	570	114
South Branch	3-00730	4	0.0 - 3.3	3.2		U	240	48
Little George Creek	2-001550	4	0.0 - 2.8	2.7		M	203	41

Table 7, page 10

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.) TOTAL STANDING CROP	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.) TOTAL SUSTAINED HARVEST
Totier Creek	2-001580	4	0.0 - 6.7	9.3		U	698	140
Rock Island Run	2-001590	5	0.0 - 1.0	1.0		U	209	42
Rock Island Run	2-001590	4	1.0 - 3.8	1.7		U	203	41
Ballinger Creek	2-001600	4	0.0 - 6.5	6.3		U	473	95
Rockfish River	2-001660	6	0.0 - 9.3	29.0		U	4,350	870
unnamed lake		P	9.3 - 10.0	31.0				
Rockfish River	2-001660	6	10.0 - 27.5	80.0		O	12,000	2,400
North Fork	2-001660	3	27.5 - 31.4	7.6		U	532	106
Buffalo Creek	3-00130	4	0.0 - 5.5	10.7		M	803	161
Hog Creek	3-00160	4	0.0 - 1.2	1.2		U	90	18
Green Creek	3-00180	4	0.0 - 5.8	5.6		U	420	84
Sheepneck Branch	4-0140	4	0.0 - 0.8	0.8		U	60	12
Dutch Creek	3-00330	3	0.0 - 3.5	6.8		O	476	95
South Fork Rockfish River	3-00570	3	0.0 - 6.0	8.0		O	560	112
Stony Creek	4-0060	2	0.0 - 3.7	3.6		O	180	29
Spruce Creek	4-0080	2	0.0 - 1.8	1.7		O	85	14
Malloyds Creek	3-00610	2	0.0 - 1.7	1.6		O	80	13
Sycamore Creek	2-001770	4	0.0 - 1.4	1.4		O	105	21
Tye River	2-001900	6	0.0 - 22.2	202.0	Yes #	U	12,888	2,978
Tye River	2-001900	3	22.2 - 31.9	54.0		O	3,780	756
North Fork	2-001900	3	31.9 - 35.1	6.2		O	434	87
North Fork	2-001900	2	35.1 - 37.3	2.1		O	105	17
Rucker Run	3-00040	6	0.0 - 8.5	26.8		U	4,020	804

Table 7, page 11

Buffalo River	3-00150	6	0.0 - 12.4	112.0		M	16,800	3,360
Buffalo River	3-00150	5	12.4 - 20.6	15.5		0	1,705	341
Buffalo River	3-00150	3	20.6 - 28.9	13.4		0	938	188
North Fork	3-00150	2	28.9 - 32.5	3.5		0	175	28
South Fork	4-0870	2	0.0 - 1.5	0.7		0	35	6
Piney River	3-00350	6	0.0 - 10.9	81.0	Yes #	U	5,400	1,080
Piney River	3-00350	3	10.9 - 15.8	9.5		0	665	133
South Fork	3-00350	2	15.8 - 17.9	2.0		0	100	16
Little Piney River	4-0150	2	0.0 - 4.7	4.6		0	230	37
Georges Creek	5-0050	2	0.0 - 0.5	0.5		0	25	4
Shoe Creek	4-0320	2	0.0 - 1.1	1.1		0	55	9
North Fork	4-0340	2	0.0 - 2.5	2.4		0	120	19
Greasy Spring Branch	4-0400	2	0.0 - 0.5	0.2		0	10	2
Rocky Run	3-00510	2	0.0 - 2.2	2.1		0	105	17
Harpers Creek	3-00580	2	0.0 - 0.5	0.3		0	15	2
Cox Creek	3-00610	2	0.0 - 1.0	1.0		0	50	8
Campbell Creek	3-00620	3	0.0 - 1.3	2.5		0	175	35
South Fork	3-00630	3	0.0 - 5.1	9.9		0	693	139
Crabtree Creek	4-0030	2	0.0 - 1.0	1.0		0	50	8
Maidenheart Branch	4-0070	2	0.0 - 1.0	0.6		0	30	5
Joes Branch	4-0120	2	0.0 - 0.5	0.3		0	15	2
White Rock Creek	3-00660	2	0.0 - 0.4	0.2		0	10	2
Durham Run	3-00680	2	0.0 - 0.5	0.5		0	25	4

Table 7, page 12

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.) TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
David Creek	2-001950	6	0.0 - 5.1	11.2		U	1,680	336
David Creek	2-001950	4	5.1 - 8.7	3.5		U	263	53
Stevens Run	3-00130	4	0.0 - 1.7	1.6		M	120	24
Bent Creek	2-001970	4	0.0 - 8.4	14.2		U	1,065	213
Wreck Island Creek	2-001990	4	0.0 - 14.1	36.6		U	2,745	549
Stonewall Creek	2-002090	4	0.0 - 3.6	3.5		U	263	53
Beaver Creek	2-002190	4	0.0 - 9.5	18.1		O	1,358	272
Little Beaver Creek	3-00010	4	0.0 - 4.8	6.1		O	458	92
Opossum Creek	2-002210	4	0.0 - 2.8	2.7		O	203	41
Fishing Creek	2-002230	4	0.0 - 2.4	3.6	Yes #	U	129	26
Blackwater Creek	2-002250	4	0.0 - 6.6	12.8		O	960	192
College Lake		R	6.6 - 8.0	60.0				
Blackwater Creek	2-002250	4	8.0 - 9.0	1.2		O	90	18
Ivy Creek	3-00040	4	0.0 - 13.2	17.2		U	1,290	258
Judith Creek	2-002290	4	0.0 - 1.5	1.5		O	113	23
Pedlar River	2-002340	6	0.0 - 15.6	68.0		M	10,200	2,040
Lynchburg Reservoir		R	15.6 - 17.1	75.0				
Pedlar River	2-002340	3	17.1 - 28.8	36.9		O	2,583	517
Enchanted Creek	3-00330	2	0.0 - 1.5	1.5		O	75	12
Little Irish Creek	3-00350	2	0.0 - 1.6	1.6		O	80	13
Brown Mountain Creek	3-00380	2	0.0 - 1.5	1.5		O	75	12
Davis Mill Creek	3-00520	2	0.0 - 1.5	0.7		O	35	6

Table 7, page 13

Statons Creek	3-00540	3	0.0 - 2.4	4.7		0	329	66
Reed Creek	2-002410	4	0.0 - 4.4	8.5		0	638	128
Meadow Creek	3-00160	4	0.0 - 1.8	1.7		0	128	26
Meadow Creek	3-00160	3	1.8 - 2.6	0.8		0	56	11
Hunting Creek	2-002430	4	0.0 - 4.4	8.5		0	638	128
Hunting Creek	2-002430	3	4.4 - 6.6	2.1		M	147	29
Hunting Creek	2-002430	2	6.6 - 8.0	0.7		0	35	6
Otter Creek	2-002440	2	0.0 - 3.5	3.4		U	170	27
Battery Creek	2-002450	4	0.0 - 4.0	3.9		0	293	59
Peters Creek	2-002470	4	0.0 - 0.4	0.4		U	30	6
Rocky Row Run	2-002520	2	0.0 - 1.5	0.7		0	35	6
Maury River	2-002560	6	0.0 - 41.9	419.0	Yes #	U	50,588	10,118
Calfpasture River	2-002560	6	41.9 - 65.5	71.0	Yes #	U	10,088	2,018
Calfpasture River	2-002560	5	65.5 - 72.2	13.0		0	1,430	286
Calfpasture River	2-002560	3	72.2 - 76.4	8.1		U	567	113
Calfpasture River	2-002560	2	76.4 - 77.9	1.5		M	75	12
Buffalo Creek	3-00150	5	0.0 - 12.5	24.2		U	2,662	532
Buffalo Creek	3-00150	4	12.5 - 14.5	1.9		U	143	29
South Buffalo Creek	3-00150	4	14.5 - 21.1	9.2		M	690	138
Collier's Creek	4-0300	4	0.0 - 3.8	3.7		U	278	56
North Buffalo Creek	4-0320	4	0.0 - 2.9	2.8		0	210	42
Belle Cove Branch	3-00160	2	0.0 - 3.2	1.6		M	80	13
South River	3-00360	5	0.0 - 17.8	34.5		0	3,795	759
Irish Creek	4-0120	3	0.0 - 7.3	14.2		0	994	199

Table 7, page 14

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Nettle Creek	5-0140	2	0.0 - 2.4	2.3		0	115	18
Marlbrook Creek	4-0290	4	0.0 - 2.4	1.1		0	83	17
Big Mary Creek	4-0340	2	0.0 - 3.7	3.6		0	180	29
Saint Marys River	4-0450	3	0.0 - 4.1	8.0		0	560	112
Kerr Creek	3-00530	5	0.0 - 7.6	14.7		U	1,617	323
Hays Creek	3-00660	4	0.0 - 6.5	6.3		M	473	95
Moffatt Creek	3-00660	4	6.5 - 10.4	3.8		0	285	57
Walker Creek	4-0070	2	0.0 - 2.4	2.3		U	115	18
Pisgah Branch	4-0110	2	0.0 - 1.8	1.7		0	85	14
Laurel Run	3-00770	2	0.0 - 1.3	1.3		0	65	10
Little Calfpasture River	3-00800	5	0.0 - 16.0	31.2		U	3,432	686
Little Calfpasture River	3-00800	2	16.0 - 18.6	2.5		U	125	20
Guys Run	3-00830	2	0.0 - 2.6	2.5		M	125	20
Bratton Creek	3-00890	5	0.0 - 6.6	12.8		U	1,408	282
Gouchenour Creek	4-0100	2	0.0 - 0.5	0.5		0	25	4
Mill Creek	3-00930	4	0.0 - 17.1	33.1		0	2,483	497
Black Draft	4-0060	2	0.0 - 1.9	1.8		0	90	14
Clayton Mill Creek	3-01010	2	0.0 - 2.0	1.9		0	95	15
Jerkenitight Branch	3-01210	2	0.0- 5.8	5.6		0	280	45
Ramsey Draft	3-01490	3	0.0- 5.4	10.5		0	735	147
Ramsey Draft	3-01490	2	5.4- 8.4	2.9		0	145	23
Johnson Draft	3-01630	2	0.0- 0.5	1.0		0	50	8
Elk Creek	2-002590	3	0.0- 4.5	8.9		U	623	125

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East Fork Elk Creek	3-00030	2	0.0- 2.6	2.5	O	125	20
Jennings Creek	2-002690	3	0.0- 6.0	18.9	O	1,323	265
North Creek	3-00030	2	0.0- 5.2	5.0	O	250	40
Middle Creek	3-00050	2	0.0- 3.7	3.6	O	180	29
McFalls Creek	3-00100	2	0.0- 3.4	3.3	O	165	26
Purgatory Creek	2-002720	2	0.0- 7.6	7.4	M	370	59
Looney Mill Creek	2-002730	5	0.0-11.8	22.9	O	2,519	504
Catawba Creek	2-002830	5	0.0-11.6	22.5	U	2,475	495
Craig Creek	2-002890	6	0.0-65.1	241.0	M	36,150	7,230
Patterson Creek	3-00030	4	0.0- 2.2	2.1	O	158	32
Roaring Run	3-00120	3	0.0- 1.5	2.9	O	203	41
Mill Creek	3-00460	2	0.0- 3.5	3.4	O	170	27
Barbours Creek	3-00500	3	0.0-14.5	28.1	O	1,967	393
Cove Branch	3-00580	2	0.0- 1.6	1.6	O	80	13
Johns Creek	3-00600	6	0.0- 5.1	22.3	O	3,345	669
Johns Creek	3-00600	4	5.1 - 29.3	46.9	M	3,518	704
Meadow Branch	4-0040	2	0.0 - 1.1	1.1	O	55	9
Broad Run	3-00770	2	0.0 - 2.5	0.9	O	45	7
Mill Creek	2-002920	3	0.0 - 6.7	21.1	O	1,477	295
Sinking Creek	2-002940	2	0.0 - 9.4	9.4	O	470	75
Cowpasture River	2-003040	6	0.0 - 64.6	606.0	M	90,900	18,180
Cowpasture River	2-003040	3	64.6 - 74.1	18.4	U	1,288	258
Cowpasture River	2-003040	2	74.1 - 79.6	5.3	U	265	42
Simpson Creek	3-00060	4	0.0 - 5.9	11.4	O	855	171
Pads Creek	3-00120	3	0.0 - 2.5	4.9	O	343	69

Table 7, page 16

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Pads Creek	3-00120	2	2.5 - 3.4	1.8		0	90	14
Mill Creek	3-00290	3	0.0 - 5.7	11.1		M	777	155
Little Wilson Creek	4-0020	2	0.0 - 1.0	1.0		U	50	8
Stuart Run	3-00340	4	0.0 - 7.9	15.3		U	1,148	230
Lick Run	4-0020	2	0.0 - 3.0	2.9		0	145	23
Thompson Creek	3-00390	3	0.0 - 3.1	6.0		U	420	84
Mare Run	3-00390	2	3.1 - 6.2	3.0		0	150	24
Jordan Run	4-0020	2	0.0 - 2.0	1.9		0	95	15
Dry Run	3-00430	2	0.0 - 4.4	4.3		M	215	35
Bullpasture River	3-00650	3	0.0 - 18.2	83.6		0	5,852	1,170
Bullpasture River	3-00650	2	18.2 - 21.2	2.9		0	145	23
Davis Run	4-0210	2	0.0 - 3.0	2.9		0	145	23
Crab Run	4-0290	2	0.0 - 3.9	3.8		0	190	30
Benson Run	3-00800	2	0.0 - 4.0	3.9		0	195	31
Shaw Fork	3-00900	3	0.0 - 6.7	13.0		U	910	182
Wilson Creek	2-003060	3	0.0 - 7.1	17.0		M	1,190	238
Douthat Lake		R	7.1 - 7.6	60.0				
Wilson Creek	2-003060	3	7.6 - 10.9	5.8		0	406	81
Wilson Creek	2-003060	2	10.9 - 12.6	1.6		0	80	13
Left Prong	3-00250	2	0.0 - 1.7	1.6		0	80	13
Smith Creek	2-003080	3	0.0 - 3.7	7.2		0	504	101
unnamed lake		P	3.7 - 3.9	12.0				
Smith Creek	2-003080	3	3.9 - 7.2	6.4		0	448	90

Table 7, page 17

Piney Branch	3-00030	2	0.0 - 0.7	0.7	0	35	6
Pounding Mill Creek	2-003160	3	0.0 - 3.5	6.8	0	476	95
Potts Creek	2-003190	6	0.0 - 19.8	144.0	M	21,600	4,320
Potts Creek	2-003190	3	19.8 - 37.8	70.1	0	4,907	981
Cast Steel Run	3-00120	2	0.0 - 4.1	4.0	0	200	32
Blue Spring Creek	3-00150	2	0.0 - 3.2	3.2	0	160	26
Paint Bank Branch	3-00390	2	0.0 - 1.0	1.0	0	50	8
Ewin Run	3-00450	2	0.0 - 2.4	2.3	M	115	18
Dunlap Creek	2-003230	6	0.0 - 18.4	80.3	M	12,045	2,409
Dunlap Creek	2-003230	3	18.4 - 23.5	9.9	U	693	139
Cove Creek	2-003230	3	23.5 - 25.4	8.3	U	581	116
Ogle Creek	3-00040	4	0.0 - 6.7	13.0	0	975	195
Jerrys Run	3-00140	2	0.0 - 5.5	5.3	0	265	42
Snake Run	3-00270	2	0.0 - 3.7	3.6	0	180	29
Sweet Springs Creek	3-00290	2	0.0 - 2.4	2.3	U	115	18
Indian Draft	2-003290	2	0.0 - 1.6	1.6	0	80	13
Falling Spring Creek	2-003300	2	0.0 - 2.9	2.8	0	140	22
unnamed lake		P	2.9 - 3.1	12.0			
Falling Spring Creek	2-003300	2	3.1 - 4.5	1.4	M	70	11
Cedar Creek	2-003380	2	0.0 - 2.9	3.0	0	150	24
Cascades Creek	3-00100	2	0.0 - 4.0	3.6	0	180	29
Back Creek	2-003470	4	0.0 - 29.1	64.5	0	4,838	968

Table 7, page 18

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Little Back Creek	3-00070	3	0.0 - 4.9	9.5		U	665	133
Little Back Creek	3-00070	2	4.9 - 9.8	4.8		U	240	38
Rowan Run	2-003480	1	0.0 - 1.1					
Cowardin Run	3-00030	2	0.0 - 2.4	2.3		0	115	18
Warm Springs Run	2-003520	2	0.0 - 1.0	0.5		0	25	4
Muddy Run	2-003600	2	0.0 - 4.6	4.5		0	225	36
Stony Run	2-003770	2	0.0 - 1.0	0.5		0	25	4
Bolar Run	2-003800	2	0.0 - 1.2	1.2		M	60	10

TABLE 8

FISH HABITAT

RAPPAHANNOCK-YORK RIVER BASINS

WATER AREA	RIVER 1/ SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION 2/ PRESENT	CURRENT 3/ SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Poquoson River	02-15-015	12	0.0 - 4.2	2,621.8		U	1,310,900	327,725
Poquoson River	02-15-015	11	4.2 - 5.5	2.5		U	1,000	175
York River	02-15-018	12	0.0 - 33.6	41,431.1	Yes*	U	20,715,550	5,178,888
Pamunkey River	02-15-018	12	33.6 - 53.0	3,431.3	Yes*	U	1,715,650	428,913
Pamunkey River	02-15-018	11	53.0 - 84.2	4,149.6		U	1,659,840	290,472
Pamunkey River	02-15-018	9	84.2 - 121.1	313.1		U	62,620	15,655
South Anna River	02-15-018	6	121.1 - 125.1	29.1		U	4,365	873
South Anna River	02-15-018	5	125.1 - 201.0	345.2		U	37,972	7,594
South Anna River	02-15-018	4	201.0 - 217.5	26.0		U	1,950	390
Carter Creek	2-000260	12	0.0 - 1.6	199.3		U	99,650	24,913
Carter Creek	2-000260	1	1.6 - 2.8	2.3		U	173	35
Queen Creek	2-000270	12	0.0 - 6.1	286.5	Yes*	U	143,250	35,813
Queen Creek	2-000270	4	6.1 - 7.3	1.2		O	90	18
Skimino Creek	2-000370	12	0.0 - 3.3	24.9		U	12,450	3,113
Skimino Creek	2-000370	11	3.3 - 3.5	0.1		O	40	7
Newman Pond		P	3.5 - 4.4	36.0				

1/ "A River-Mile Indexing System for Computer Application in Storing and Retrieving Data," Department of Health, Education and Welfare, Charlottesville, Virginia.

2/ # indicates finfish pollution; see table 31 for details. * indicates shellfish pollution; see table 37 for details.

3/ U = Underfished. M = Maximum fished. O = Overfished.

Table 8, page 2

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.) TOTAL STANDING CROP	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.) TOTAL SUSTAINED HARVEST
Skimino Creek	2-000370	4	4.4 - 5.3	1.7		U	128	26
Poropotank River	2-000500	12	0.0 - 2.0	442.1		U	221,050	55,263
Poropotank River	2-000500	11	2.0 - 3.8	21.8		U	8,720	1,526
Poropotank River	2-000500	7	3.8 - 5.2	2.7		U	405	103
Poropotank River	2-000500	4	5.2 - 7.7	2.4		U	180	36
Ware Creek	2-000510	12	0.0 - 2.0	24.9		U	12,450	3,113
Ware Creek	2-000510	11	2.0 - 3.1	1.7		O	680	119
Mattaponi River	2-000560	12	0.0 - 17.5	2,503.4		U	1,251,700	312,925
Mattaponi River	2-000560	11	17.5 - 36.7	2,198.3		U	879,320	153,881
Mattaponi River	2-000560	7	36.7 - 94.7	479.1		U	71,865	18,205
Poni River	2-000560	7	94.7 - 98.6	12.3		U	1,845	467
Po River	2-000560	7	98.6 - 101.6	17.6		U	2,640	669
unnamed pond		P	101.6 - 103.1	18.0				
Po River	2-000560	7	103.1 - 119.0	60.6		U	9,091	2,303
Robertson Run	2-000560	7	119.0 - 121.8	2.7		M	405	103
Burnt Mill Creek	3-00040	11	0.0 - 1.8	7.8		O	3,120	546
Burnt Mill Creek	3-00040	7	1.8 - 3.8	1.9		O	285	72
Corbin Creek	3-00060	11	0.0 - 1.3	4.1		O	1,640	287
Corbin Pond		R	1.3 - 2.3	93.0				
Tastine Swamp	3-00060	7	2.3 - 6.3	3.9		U	585	148
Heartquake Creek	3-00160	11	0.0 - 0.5	1.6		O	640	112
Heartquake Creek	3-00160	7	0.5 - 2.8	4.5		U	675	171
Bull Swamp	3-00210	11	0.0 - 0.4	0.8		O	320	56
Custis Pond		R	0.4 - 1.0	75.0				
Bull Swamp	3-00210	7	1.0 - 3.6	2.5		U	375	95

Table 8, page 3

Grass Creek	3-00240	7	0.0 - 2.0	1.9	U	285	72
Courthouse Creek	3-00280	11	0.0 - 1.2	3.8	O	1,520	266
unnamed pond		P	1.2 - 1.5	17.0			
Courthouse Creek	3-00280	7	1.5 - 3.0	1.4	U	210	53
Mantapike Creek	3-00380	7	0.0 - 1.9	1.8	U	270	68
Garnetts Creek	3-00420	11	0.0 - 1.5	4.7	O	1,880	329
Garnetts Creek	3-00420	7	1.5 - 7.1	10.8	U	1,620	410
Walkerton Branch	3-00480	11	0.0 - 1.0	3.2	O	1,280	224
Walkerton Branch	3-00480	7	1.0 - 3.4	2.3	U	345	87
Herring Creek	3-00630	7	0.0 - 1.5	2.4	U	360	91
unnamed pond		P	1.5 - 1.8	36.0			
Herring Creek	3-00630	7	1.8 - 11.8	15.0	U	2,250	570
unnamed stream	4-0090	7	0.0 - 0.2	0.2	U	30	7
unnamed pond		P	0.2 - 0.7	24.0			
unnamed stream	4-0090	7	0.7 - 2.9	2.2	U	330	84
Dorrell Creek	4-0130	7	0.0 - 4.0	3.9	U	585	148
Chapel Hill Creek	3-00640	7	0.0 - 5.4	12.9	U	1,935	490
unnamed pond		P	5.4 - 6.0	31.0			
Chapel Hill Creek	3-00640	7	6.0 - 9.4	3.3	U	495	125
Beaver Branch	4-0040	7	0.0 - 2.5	2.4	U	360	91
Maracossic Creek	3-00720	7	0.0 - 13.4	39.1	U	5,865	1,486
Beverly Run	4-0020	7	0.0 - 12.5	35.2	U	5,280	1,338
Root Swamp	5-0020	7	0.0 - 2.6	2.5	U	375	95

Table 8, page 4

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Doctors Creek	4-0050	7	0.0 - 6.5	6.3		U	945	239
Reedy Creek	3-00770	7	0.0 - 9.0	17.4		U	2,610	661
Polecat Swamp	3-00810	7	0.0 - 9.4	16.6		U	2,490	631
South River	3-00910	7	0.0 - 12 3	24.8		U	3,720	942
Matta River	3-01110	7	0.0 - 10.0	36.8		U	5,520	1,398
Mat River	3-01110	7	10.0 - 14.7	9.1		U	1,365	346
Ta River	4-0380	7	0.0 - 8.5	14.3		U	2,145	543
Bluff Run	5-0110	7	0.0 - 4.4	8.5		U	1,275	323
Ni River	3-01200	7	0.0 - 17.2	49.2		U	7,380	1,870
Brock Run	4-0470	7	0.0 - 3.8	3.7		U	555	141
Gladys Run	3-01430	7	0.0 - 1.2	2.3		M	345	87
Gladys Pond		P	1.2 - 1.7	22.0				
Gladys Run	3-01430	7	1.7 - 5.0	6.4		U	960	243
Catharpin Run	3-01630	7	0.0 - 2.4	2.3		U	345	87
North Prong	3-01640	7	0.0 - 1.0	1.0		U	150	38
Cooks Creek	2-000640	11	0.0 - 1.4	2.0		0	800	140
Holts Creek	2-000751	11	0.0 - 2.0	14.5		0	5,800	1,015
Holts Creek	2-000751	7	2.0 - 2.5	.5		0	75	19
Cohoke Creek	2-000760	11	0.0 - 0.8	4.5		0	1,800	315
Cohoke Pond		R	0.8 - 2.3	81.0				
Cohoke Creek	2-000760	7	2.3 - 4.3	3.9		U	585	148
Mills Pond		P	4.3 - 4.8	36.0				

Table 8, page 5

Cohoke Creek	2-000760	7	4.8 - 7.0	2.1	U	315	80
Harrison Creek	2-000820	7	0.0 - 1.0	3.5	U	480	122
Jacks Creek	2-000840	7	0.0 - 5.0	9.0	U	1,350	342
Acquinton Creek	3-00040	7	0.0 - 6.5	10.2	U	1,530	388
Black Creek	2-000850	11	0.0 - 0.4	6.2	O	2,480	434
Black Creek	2-000850	7	0.4 - 4.9	6.5	U	975	247
Matadequin Creek	2-000870	7	0.0 - 3.5	6.8	U	1,020	258
Manoquin Creek	2-000920	7	0.0 - 5.9	8.5	U	1,275	323
unnamed pond		P	5.9 - 6.3	12.0			
Webb Creek	2-000920	7	6.3 - 10.0	3.7	U	555	141
unnamed stream	2-000960	7	0.0 - 3.0	5.8	U	870	220
Totopotomoy Creek	2-000970	4	0.0 - 10.7	15.0	U	1,125	225
Judy Swamp	2-000980	7	0.0 - 2.0	3.9	U	585	148
Mehixen Creek	2-001000	7	0.0 - 2.5	2.4	U	360	91
Crump Creek	2-001050	4	0.0 - 7.5	7.3	M	548	110
unnamed stream	3-00020	4	0.0 - 1.2	1.2	O	90	18
Mill Pond Creek	2-001060	7	0.0 - 5.2	10.1	U	1,515	384
Mechamps Creek	2-001090	4	0.0 - 3.0	2.9	O	218	44
North Anna River	2-001160	7	0.0 - 31.1	226.2	U	33,930	8,596
North Anna River	2-001160	4	31.1 - 66.5	56.7	U	7,253	1,451
Negro Run	2-001160	4	66.5 - 71.3	4.7	U	353	71
Little River	3-00050	7	0.0 - 19.8	96.7	U	14,505	3,675
unnamed pond		P	19.8 - 20.5	14.0			
Little River	3-00050	7	20.5 - 25.0	5.8	M	870	220
unnamed pond		P	25.0 - 25.5	15.0			

Table 8, page 6

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Little River	3-00050	7	25.5 - 33.3	9.0		U	1,350	342
unnamed pond		P	33.3 - 34.0	24.0				
Little River	3-00050	7	34.0 - 36.7	3.3		U	495	125
Beaverdam Creek	4-0220	4	0.0 - 2.6	2.5		M	188	38
North East Creek	3-00060	7	0.0 - 11.9	24.3		U	3,645	923
Mill Pond Creek	3-00630	7	0.0 - 4.3	5.2		U	780	198
Elk Creek	3-00690	4	0.0 - 2.9	2.8		U	210	42
Contrary Creek	3-00830	1	0.0 - 5.6					
unnamed stream	4-0070	4	0.0 - 2.5	1.8		M	135	27
Pigeon Run	3-00860	7	0.0 - 4.4	6.2		U	930	236
North Fork	3-00880	7	0.0 - 13.4	30.2		U	4,530	1,148
North Fork	3-00880	4	13.4 - 17.0	7.0		U	525	105
unnamed stream	4-0080	7	0.0 - 7.3	7.1		U	1,065	270
Terrys Creek	4-0120	7	0.0 - 2.6	5.0		U	750	190
Terrys Creek	4-0120	4	2.6 - 9.9	8.7		U	653	131
Foremost Run	5-0020	7	0.0 - 2.5	2.4		U	360	91
Pamunkey Creek	4-0330	4	0.0 - 3.8	4.6		U	345	69
Clear Creek	4-0350	4	0.0 - 2.1	1.5		M	113	23
Christopher Creek	3-00930	4	0.0 - 4.0	2.9		U	218	44
Goldmine Creek	3-01030	4	0.0 - 2.7	2.6		U	195	39
Hickory Creek	3-01130	4	0.0 - 1.3	1.3		M	98	20
Coxes Mill Run	3-01160	4	0.0 - 2.0	2.4		U	180	36
Falling Creek	2-001210	4	0.0 - 3.4	4.1		U	308	62

Table 6, page 7

Newfound River	2-001220	4	0.0 - 16.5	22.1	U	1,658	332
Cedar Creek	2-001300	4	0.0 - 1.2	1.2	O	90	18
Taylors Creek	2-001340	4	0.0 - 6.7	8.1	U	608	122
Owens Creek	2-001530	4	0.0 - 2.4	2.9	O	218	44
Deep Creek	2-001670	4	0.0 - 2.3	2.2	M	165	33
Fork Creek	2-001810	4	0.0 - 2.7	2.6	U	195	39
Harris Creek	2-002080	4	0.0 - 6.5	6.3	M	473	95
Roundabout Creek	2-002090	4	0.0 - 4.0	5.8	U	435	87
Reed Creek	2-002210	4	0.0 - 2.2	2.1	M	158	32
Rock Creek	2-002230	4	0.0 - 2.4	2.3	M	173	35
Fosters Creek	2-002250	4	0.0 - 3.1	3.0	M	225	45
Wheeler Creek	2-002270	4	0.0 - 3.0	2.2	U	165	33
Hudson Creek	3-00020	4	0.0 - 4.9	4.8	U	360	72
Bunch Creek	4-0010	4	0.0 - 0.2	0.5	O	38	8
unnamed pond		P	0.2 - 0.4	20.0			
Bunch Creek	4-0010	4	0.4 - 1.3	0.6	M	45	9
Camp Creek	3-00030	4	0.0 - 3.5	2.5	U	188	38
Ware River	02-15-024	12	0.0 - 8.2	4,751.5	U	2,375,750	593,938
Beaverdam Swamp	02-15-024	4	8.2 - 10.3	4.1	U	308	62
Fox Mill Run	2-000030	7	0.0 - 3.4	6.1	U	458	92
North River	02-15-025	12	0.0 - 8.0	5,561.1	U	2,780,550	695,138
North End Branch	02-15-025	4	8.0 - 9.8	1.7	U	128	26
Piankatank River	02-15-044	12	0.0 - 17.5	7,553.9	U	3,776,950	944,238
Piankatank River	02-15-044	11	17.5 - 21.5	180.1	U	72,040	12,607

Table 8, page 8

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Dragon Swamp	02-15-044	7	21.5 - 51.0	155.4		U	23,310	5,905
Ferry Creek	2-000110	12	0.0 - 1.0	74.7		U	37,350	9,338
Ferry Creek	2-000110	4	1.0 - 1.9	1.7		U	128	26
Foxes Swamp	2-000150	12	0.0 - 0.5	62.3		U	31,150	7,788
Foxes Swamp	2-000150	4	0.5 - 3.0	2.4		U	180	36
Golomy Swamp	3-00050	4	0.0 - 0.7	0.7		U	53	11
unnamed stream	2-000160	12	0.0 - 1.5	112.1		U	56,050	14,013
unnamed stream	2-000160	7	1.5 - 2.4	0.9		O	135	34
unnamed stream	3-00050	7	0.0 - 1.7	1.7		O	255	65
Carvers Creek	2-000170	4	0.0 - 2.8	5.4		U	405	81
Tin Branch Swamp	2-000350	7	0.0 - 2.5	4.8		U	720	182
Exol Swamp	2-000370	7	0.0 - 5.0	9.7		U	1,455	369
Rappahannock River	02-15-046	12	0.0 - 46.0	72,020.3	Yes*	U	36,010,150	9,002,538
Rappahannock River	02-15-046	11	46.0 - 109.5	15,223.1	Yes#	U	6,089,399	1,044,776
Rappahannock River	02-15-046	6	109.5 - 154.8	1,245.0		U	186,750	37,350
Rappahannock River	02-15-046	5	154.8 - 160.3	24.0		U	2,640	528
Rappahannock River	02-15-046	4	160.3 - 184.0	34.0		U	2,550	510
Corotoman River	2-000140	12	0.0 - 10.0	5,087.8		U	2,543,900	635,975
Corotoman River	2-000140	11	10.0 - 11.0	3.6		U	1,440	252
Corotoman River	2-000140	7	11.0 - 13.0	3.9		U	585	148
Eastern Branch Corotoman River	3-00060	12	0.0 - 5.0	971.5		U	485,750	121,438
Eastern Branch Corotoman River	3-00060	7	5.0 - 5.4	0.4		U	60	15

Table 8, page 9

Eastern Branch Corotoman River	4-0100	7	0.0 - 0.8	0.8		U	120	30
Little Branch	3-00130	12	0.0 - 1.0	105.9		U	52,950	13,238
Little Branch	3-00130	7	1.0 - 1.3	0.4		U	60	15
Belwood Swamp	3-00150	7	0.0 - 1.2	3.8		U	570	144
McMahon Swamp	4-0030	7	0.0 - 2.1	4.1		U	615	156
Urbana Creek	2-000190	12	0.0 - 2.5	311.4	Yes*	U	155,700	38,925
Urbana Creek	2-000190	7	2.5 - 4.5	9.7		U	1,455	369
Parrotts Creek	2-000270	12	0.0 - 1.5	112.1		U	56,050	14,013
Parrotts Creek	2-000270	7	1.5 - 3.0	1.4		U	210	53
Parrotts Creek	3-00020	7	0.0 - 1.9	1.8		U	270	68
Lancaster Creek	2-000340	12	0.0 - 2.5	1,040.0		U	520,000	130,000
Lancaster Creek	2-000340	11	2.5 - 6.5	101.5		U	40,600	7,105
Balls Branch	3-00060	5	0.0 - 0.6	0.6		M	66	13
Farnham Creek	2-000360	12	0.0 - 2.0	255.3		U	127,650	31,913
Farnham Creek	2-000360	11	2.0 - 4.5	9.1		U	3,640	637
Muddy Gut	2-000390	7	0.0 - 1.0	1.0		U	150	38
Richardson Creek	2-000400	12	0.0 - 1.2	74.7		U	37,350	9,338
Richardson Creek	2-000400	7	1.2 - 3.7	2.4		U	360	91
Totuskey Creek	2-000420	11	0.0 - 9.5	650.0		U	260,000	45,500
Totuskey Creek	2-000420	7	9.5 - 12.4	2.7		U	405	103
Little Totuskey Creek	3-00070	11	0.0 - 2.6	8.2		O	3,280	574
Garlands Mill Pond		4	2.6 - 3.7	48.0				
Little Totuskey Creek	3-00070	7	3.7 - 8.0	8.3		U	1,245	315
Piscataway Creek	2-000[illegible]	11	0.0 - 6.0	323.8		U	129,520	22,666

Table 8, page 10

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Piscataway Creek	2-000490	7	6.0 - 11.5	10.6		M	1,590	403
unnamed pond		P	11.5 - 11.8	20.0				
Piscataway Creek	2-000490	7	11.8 - 13.3	2.4		U	360	91
Mill Creek	3-00030	7	0.0 - 0.6	1.2		M	180	46
unnamed stream	4-0040	7	0.0 - 2.1	2.0		U	300	76
Mussel Swamp	3-00050	7	0.0 - 1.5	1.4		U	210	53
Little Carter Creek	2-000500	12	0.0 - 3.0	68.5		U	34,250	8,563
Little Carter Creek	2-000500	11	3.0 - 4.0	6.1		U	2,440	427
Hoskins Creek	2-000510	11	0.0 - 3.5	56.0		U	22,400	3,920
Hoskins Creek	2-000510	7	3.5 - 6.5	5.0		U	750	190
unnamed pond		P	6.5 - 6.8	19.0				
Hoskins Creek	2-000510	7	6.8 - 11.7	8.5		U	1,275	323
unnamed pond		P	11.7 - 11.9	24.0				
Hoskins Creek	2-000510	7	11.9 - 12.6	1.1		U	165	42
Mt. Landing Creek	2-000530	11	0.0 - 3.5	118.3		U	47,320	8,281
Mt. Landing Creek	2-000530	7	3.5 - 8.3	7.6		U	1,140	289
Bull Neck Creek	2-000530	7	8.3 - 11.8	4.2		U	630	160
Croxton Stream	3-00110	7	.0 - 2.6	3.2		U	480	122
Cat Point Creek	2-000540	11	0.0 - 8.5	691.2		U	276,480	48,384
Cat Point Creek	2-000540	6	8.5 - 12.1	11.3		U	1,695	339
Cat Point Creek	2-000540	7	12.1 - 16.1	6.4		U	960	243
Muddy Run	3-00040	7	0.0 - 1.0	.9		U	135	34
Menokin Mill Pond		P	1.0 - 1.3	18.0				

Table 8, page 11

Muddy Run	3-00040	7	1.3 - 1.6	0.3	U	45	11
Connellee Mill Pond		P	1.6 - 1.8	17.0			
Muddy Run	3-00040	7	1.8 - 2.5	0.8	U	120	30
Pantico Creek	3-00100	7	0.0 - 3.0	2.9	U	435	110
Occupacia Creek	2-000610	11	0.0 - 6.2	566.7	U	226,680	39,669
Occupacia Creek	2-000610	7	6.2 - 8.4	4.0	O	600	152
Hunters Mill Pond		P	8.4 - 8.8	38.0			
Occupacia Creek	2-000610	7	8.8 - 12.0	4.2	M	630	160
Taliajerro Pond		R	12.0 - 12.7	43.0			
Black Water Swamp	2-000610	7	12.7 - 13.9	3.9	M	585	148
unnamed pond		P	13.9 - 14.5	29.0			
Black Water Swamp	2-000610	7	14.5 - 16.0	4.0	M	600	152
Farmers Hall Creek	3-00030	11	0.0 - 1.5	21.8	U	8,720	1,526
Farmers Hall Creek	3-00030	7	1.5 - 3.5	2.4	O	360	91
unnamed stream	3-00130	7	0.0 - 2.0	1.9	U	285	72
unnamed stream	3-00210	7	0.0 - 2.3	2.2	U	330	84
Broken Branch Creek	2-000660	7	0.0 - 2.0	2.9	U	435	110
Pee Dee Creek	2-000680	9	0.0 - 3.1	18.8	U	3,760	940
Elmwood Creek	2-000730	11	0.0 - 1.3	19.2	M	7,680	1,344
Elmwood Creek	2-000730	7	1.3 - 4.3	9.4	U	1,410	357
unnamed creek	3-00020	11	0.0 - [illegible]	11.2	U	4,480	784
Baylors Pond		R	1.0 - 2.0	48.0			
unnamed stream	3-00020	7	2.0 - 5.0	6.0	U	900	228
unnamed stream	4-0020	11	0.0 - 2.0	14.4	U	5,760	1,008

Table 8, page 12

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Pen Farm Creek	2-000740	7	0.0 - 3.6	7.0		U	1,050	266
Jeffs Creek	2-000800	7	0.0 - 4.0	7.8		U	1,170	296
Tobacco Creek	2-000810	7	0.0 - 4.8	15.1		M	2,265	574
Woodlawn Creek	2-000840	9	0.0 - 1.4	52.8		U	10,560	2,640
Woodlawn Creek	2-000840	7	1.4 - 2.7	2.5		U	375	95
Pamunsend Creek	2-000850	11	0.0 - 1.1	3.5		O	1,400	245
Millers Pond		R	1.1 - 1.8	43.0				
Pamunsend Creek	2-000850	4	1.8 - 4.6	2.7		U	203	41
Mill Creek	2-000850	4	4.6 - 10.0	5.2		U	390	78
South Fork Pamunsend Creek	3-00110	4	0.0 - 2.4	2.3		U	173	35
Goldenwater Creek	2-000890	11	0.0 - 0.6	3.1		M	1,240	217
unnamed pond		P	0.6 - 0.8	17.0				
Goldenwater Creek	2-000890	7	0.8 - 9.0	8.0		U	1,200	304
Mount Creek	2-000950	11	0.0 - 1.8	10.9		U	4,360	763
Mount Creek	2-000950	4	1.8 - 4.4	2.5		U	188	38
Dogue Run	2-000980	7	0.0 - 0.7	0.7		M	105	27
Kays Run	3-00010	7	0.0 - 0.4	0.4		O	60	15
Lambs Creek	2-001000	7	0.0 - 2.8	3.6		U	540	137
Birchwood Creek	2-001020	7	0.0 - 1.4	.6		U	390	99
unnamed stream	3-00010	7	0.0 - 2.0	3.9		U	585	148
Ware Creek	2-001030	11	0.0 - 0.9	1.7		O	680	119
Ware Creek	2-001030	4	0.9 - 4.6	3.6		U	270	54

Table 8, page 13

unnamed stream	2-001050	11	0.0 - 0.8	0.8	U	320	56
Muddy Creek	2-001060	7	0.0 - 1.0	1.0	U	150	38
Massaponax River	2-001090	7	0.0 - 0.3	0.5	O	75	19
Ruffians Pond		R	0.3 - 1.3	165.0			
Massaponax River	2-001090	7	1.3 - 9.6	25.6	U	3,840	973
Hazel Run	2-001130	7	0.0 - 3.0	5.8	U	870	220
Motts Run	2-001210	7	0.0 - 5.7	5.5	U	825	209
unnamed stream	2-001220	7	0.0 - 3.0	2.9	U	435	110
unnamed stream	2-001[illegible]40	7	0.0 - 1.7	1.6	U	240	61
Rapidan River	2-001270	6	0.0 - 43.5	440.5	U	66,075	13,215
Rapidan River	2-001270	5	43.5 - 78.2	113.5	U	12,485	2,497
Rapidan River	2-001270	3	78.2 - 83.5	7.8	O	546	109
Rapidan River	2-001270	2	83.5 - 85.2	0.6	U	30	5
Hunting Creek	3-00010	7	0.0 - 2.3	2.2	U	330	84
Wilderness Run	3-00090	7	0.0 - 3.7	7.2	U	1,080	274
Flat Run	3-00110	4	0.0 - 5.3	6.4	U	480	96
Mine Run	3-00210	4	0.0 - 10.6	17.4	U	1,305	261
Walnut Run	4-0160	4	0.0 - 3.7	3.1	U	233	47
Mountain Run	3-00230	5	0.0 - 10.5	21.2	U	2,332	466
Mountain Run	3-00230	4	10.5 - 14.1	3.6	U	195	39
Brook Run	3-00240	4	0.0 - 2.5	2.4	O	180	36
Potato Run	3-00260	4	0.0 - 2.6	5.0	U	375	75
Summerduck Run	3-00280	4	0.0 - 2.0	1.9	U	143	29
Cedar Run	3-00320	4	0.0 - 5.6	9.9	U	743	149

Table 8, page 14

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.) TOTAL STANDING CROP	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.) TOTAL SUSTAINED HARVEST
Robertson River	3-00400	6	0.0 - 14.1	49.6		U	7,440	1,488
Robertson River	3-00400	4	14.1 - 21.3	14.0		M	1,050	210
Robertson River	3-00400	3	21.3 - 27.6	9.2		O	644	129
Robertson River	3-00400	2	27.6 - 30.2	2.2		O	110	18
Great Run	4-0010	4	0.0 - 4.2	4.1		U	308	62
Crooked Run	4-0040	4	0.0 - 8.5	12.4		U	930	186
Little Crooked Run	5-0070	4	0.0 - 2.7	2.3		U	173	35
Dark Run	4-0090	4	0.0 - 3.6	3.5		M	263	53
Deep Run	4-0100	4	0.0 - 6.2	6.0		U	450	90
White Oak Run	4-0110	4	0.0 - 4.2	5.1		U	383	77
Rose River	4-0190	3	0.0 - 2.6	4.1		O	287	57
Rose River	4-0190	2	2.6 - 5.6	2.5		O	125	20
Strathers Run	5-0030	2	0.0 - 1.1	0.9		O	45	7
Cedar Run	4-0230	3	0.0 - 1.4	1.2		O	84	17
Beautiful Run	3-00440	4	0.0 - 8.5	11.0		U	825	165
unnamed pond		P	8.5 - 9.0	12.0				
Beautiful Run	3-00440	4	9.0 - 10.0	0.5		U	38	8
Blue Run	3-00450	4	0.0 - 2.6	2.5		M	188	38
Marsh Run	3-00470	4	0.0 - 2.5	2.1		U	158	32
Elk Run	3-00540	4	0.0 - 3.2	2.3		U	173	35
South River	3-00570	4	0.0 - 5.5	10.7		U	803	161
South River	3-00570	3	5.5 - 11.4	6.9		O	483	97
Conway River	3-00590	3	0.0 - 12.3	22.3		U	1,561	312

Table 8, page 15

Garth Run	3-00630	3	0.0 - 4.9	4.8	O	336	67
Staunton River	3-00680	3	0.0 - 2.9	2.5	O	175	35
Deep Run	2-001320	4	0.0 - 7.6	11.5	U	863	173
Rock Run	2-001340	4	0.0 - 2.7	2.6	U	195	39
unnamed stream	2-001360	4	0.0 - 2.3	2.2	U	165	33
Mountain Run	2-001430	5	0.0 - 13.5	42.5	M	4,675	935
Mountain Run	2-001430	4	13.5 - 27.3	24.5	U	1,838	368
Marshy Run	2-001480	4	0.0 - 7.3	16.0	U	1,200	240
Harpers Run	3-00040	4	0.0 - 2.3	2.2	U	165	33
Browns Run	3-00060	4	0.0 - 1.8	1.7	U	128	26
Tinpot Run	2-001500	4	0.0 - 3.2	3.1	U	233	47
Hazel River	2-001530	6	0.0 - 11.7	66.2	M	9,930	1,986
Hazel River	2-001530	5	11.7 - 31.7	57.1	U	6,281	1,256
Hazel River	2-001530	4	31.7 - 37.8	8.9	U	668	134
Hazel River	2-001530	3	37.8 - 39.8	1.4	O	98	20
Muddy Run	3-00030	4	0.0 - 9.1	14.9	M	1,118	224
Indian Run	3-00060	4	0.0 - 4.8	6.8	M	510	102
Thornton River	3-00100	5	0.0 - 20.1	61.5	U	6,765	1,353
Thornton River	3-00100	3	20.1 - 24.3	8.1	U	567	113
Battle Run	4-0080	4	0.0 - 2.0	1.9	U	143	29
Rush River	4-0100	5	0.0 - 6.7	16.2	U	1,782	356
Rush River	4-0100	3	6.7 - 11.1	5.6	O	392	78
Covington River	5-0010	5	0.0 - 4.5	8.2	U	902	180
Covington River	5-0010	4	4.5 - 6.3	3.5	U	263	53

Table 8, page 16

Keyser Run	5-0010	4	6.3 - 7.1	0.7	O	53	11
Racer Run	6-0040	4	0.0 - 0.8	0.7	O	53	11
White Walnut Run	4-0110	4	0.0 - 3.2	3.1	U	233	47
North Fork Thornton River	4-0140	3	0.0 - 8.5	14.6	O	1,022	204
Piney River	5-0020	3	0.0 - 5.0	5.1	O	357	71
Devils Run	3-00170	4	0.0 - 3.8	3.7	M	278	56
Hughes River	3-00190	5	0.0 - 4.6	13.9	U	1,529	306
Hughes River	3-00190	3	4.6 - 8.8	8.3	O	581	116
Hughes River	3-00190	2	8.8 - 11.8	2.5	O	125	20
Broken Back Run	4-0070	2	0.0 - 3.0	2.5	O	125	20
Great Run	2-001560	4	0.0 - 9.5	15.0	U	1,125	225
Carter Run	2-001600	5	0.0 - 3.4	6.6	U	726	145
Carter Run	2-001600	4	3.4 - 11.2	7.6	U	570	114
South Run	3-00050	4	0.0 - 6.8	6.6	U	495	99
Thumb Run	2-001640	4	0.0 - 10.1	15.2	U	1,140	228
East Branch Thumb Run	3-00200	[illegible]	0.0 - 3.7	3.6	U	270	54
Jordan River	2-001690	5	0.0 - 4.0	12.6	U	1,386	277
Jordan River	2-001690	4	4.0 - 6.3	2.2	M	165	33
Fiery Run	2-001720	4	0.0 - 1.8	1.7	U	128	26

TABLE 9

FISH HABITAT

POTOMAC RIVER BASIN

WATER AREA	RIVER 1/ SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION 2/ PRESENT	CURRENT 3/ SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Potomac River	02-14-001	12	0.0 - 49.6	167,011.0	Yes #	U	83,505,500	20,876,375
Potomac River	02-14-001	11	49.6 - 115.8	74,073.0	Yes #	U	27,536,200	4,829,335
Potomac River	02-14-001	9	115.8 - 171.4	11,174.0	Yes #	U	2,234,800	558,700
Potomac River	02-14-001	6	171.4 - 285.1	5,235.0	Yes #	U	785,250	157,050
North Branch Potomac River	02-14-001	8	285.1 - 307.1	291.0	Yes #	U	45,407	6,402
North Branch Potomac River	02-14-001	6	307.1 - 338.5	485.0	Yes #	U	36,375	7,275
North Branch Potomac River	02-14-001	5	338.5 - 360.5	160.0	Yes #		0	0
North Branch Potomac River	02-14-001	3	360.5 - 376.5	77.5	Yes #		0	0
Little Wicomico River	2-000010	12	0.0 - 4.6	1,676.0		U	838,000	209,500
Little Wicomico River	2-000010	11	4.6 - 5.4	187.0		U	74,800	13,090
Little Wicomico River	2-000010	4	5.4 - 6.0	0.6		U	45	9
unnamed pond		P	6.0 - 6.2	18.6				
Little Wicomico River	2-000010	4	6.2 - 7.3	1.0		U	75	15
Little Wicomico River	3-00090	4	0.0 - 0.8	0.7		U	53	11
Hack Creek	2-000030	12	0.0 - 1.7	175.0		U	87,500	21,875
Hack Creek	2-000030	4	1.7 - 2.8	1.1		U	83	17
Cubitt Creek	2-000050	12	0.0 - 1.6	218.0		U	109,000	27,250

1/ "A River-Mile Indexing System for Computer Application in Storing and Retrieving Data," Department of Health, Education and Welfare, Charlottesville, Virginia.

2/ # indicates finfish pollution; see table 32 for details. * indicates shellfish pollution; see table 38 for details.

3/ U = Underfished. M = Maximum fished. O = Overfished.

Table 9, page 2

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Hull Creek	2-000070	12	0.0 - 2.8	448.0		U	224,000	56,000
Hull Creek	2-000070	11	2.8 - 3.7	40.0		U	16,000	2,800
Hull Creek	2-000070	4	3.7 - 4.3	0.2		0	15	3
unnamed pond		P	4.3 - 4.7	31.0				
Hull Creek	2-000070	4	4.7 - 6.1	0.3		0	23	5
unnamed stream	3-00040	11	0.0 - 0.4	11.2		U	4,480	784
unnamed stream	3-00040	4	0.4 - 1.4	0.8		0	60	12
unnamed stream	3-00070	4	0.0 - 0.4	0.1		0	8	2
Point Lookout Creek	2-000080	12	0.0 - 1.7	330.0		U	165,000	41,250
Presley Creek	2-000090	12	0.0 - 1.9	255.0		U	127,500	31,875
Presley Creek	2-000090	4	1.9 - 3.3	2.4		0	180	36
Potter Creek	2-000100	12	0.0 - 0.7	75.0		U	37,500	9,375
Cod Creek	2-000110	12	0.0 - 1.4	280.0		U	140,000	35,000
Coan River	2-000130	12	0.0 - 5.9	2,340.0		U	1,170,000	292,500
Coan Mill Stream	2-000130	4	5.9 - 7.5	2.0		0	150	30
Mill Creek	3-00080	12	0.0 - 0.9	50.0		U	25,000	6,250
Mill Creek	3-00080	4	0.9 - 1.5	1.4		0	105	21
Fallins Mill Pond		P	1.5 - 1.9	31.0				
Mill Creek	3-00080	4	1.9 - 3.2	1.4		0	105	21
unnamed stream	3-00090	4	0.0 - 0.3	0.3		0	23	5
unnamed stream	3-00150	4	0.0 - 0.8	0.5		0	38	8
Harry James Creek	2-000140	12	0.0 - 0.8	187.0		U	93,500	23,375

Table 9, page 3

Calvert Creek	2-000160	12	0.0 - 0.6	50.0		U	25,000	6,250
Smith Creek	2-000180	12	0.0 - 2.7	560.0		U	280,000	70,000
Jutland Creek	3-00020	12	0.0 - 2.5	343.0		U	171,500	42,875
St. Marys River	2-000200	12	0.0 - 9.8	5,980.0	Yes* #	U	2,242,500	560,625
St. Marys River	2-000200	11	9.8 - 11.7	3.7	Yes #	0	1,480	259
St. Marys River	2-000200	7	11.7 - 13.1	2.7		0	405	103
St. Marys River	2-000200	4	13.1 - 18.6	5.3		0	398	80
Eastern Branch	3-00100	4	0.0 - 0.9	0.9		0	68	14
Hilton Run	4-0010	4	0.0 - 0.2	0.2		0	15	3
Western Branch	3-00150	4	0.0 - 2.5	4.8		0	360	72
St. George Creek	2-000220	12	0.0 - 4.3	1,869.0		U	934,500	233,625
Yecomico River	2-000230	12	0.0 - 3.3	2,120.0		U	1,060,000	265,000
Hampton Hall Branch	2-000230	12	3.3 - 5.8	187.0		U	93,500	23,375
Hampton Hall Branch	2-000230	11	5.8 - 6.6	9.7		U	3,880	679
South Yecomico River	3-00010	12	0.0 - 3.5	870.0	Yes*	U	435,000	108,750
Lodge Creek	3-00010	4	3.5 - 4.4	2.8		0	210	42
Headleys Mill Pond		R	4.4 - 5.0	55.8				
Lodge Creek	3-00010	4	5.0 - 5.3	0.3		0	23	5
Mill Creek	4-0020	12	0.0 - 2.0	220.0		U	110,000	27,500
Courtneys Mill Pond		P	2.0 - 2.4	31.0				
Mill Creek	4-0020	4	2.4 - 4.7	2.3		U	173	35
unnamed stream	3-00090	4	0.0 - 2.0	2.5		0	188	38
Bonum Creek	2-000250	12	0.0 - 1.9	74.7		U	37,350	9,338
Bonum Creek	2-000250	4	1.9 - 3.0	0.4		0	30	6

Table 9, page 4

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.) TOTAL STANDING CROP	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.) TOTAL SUSTAINED HARVEST
Jackson Creek	2-000270	12	0.0 - 1.0	87.2		U	43,600	10,900
Jackson Creek	2-000270	4	1.0 - 2.6	0.6		M	45	9
Herring Creek	2-000300	12	0.0 - 1.9	580.0		U	290,000	72,500
Blake Creek	2-000340	12	0.0 - 1.3	90.0		U	45,000	11,250
Flood Creek	2-000380	12	0.0 - 1.1	90.0		U	45,000	11,250
Lower Machadoc River	2-000410	12	0.0 - 5.7	2,430.0		U	1,215,000	303,750
Lower Macnadoc River	2-000410	4	5.7 - 6.4	0.3		M	23	5
unnamed stream	3-00030	4	0.0 - 0.8	0.2		O	15	3
unnamed stream	4-0010	4	0.0 - 0.3	0.2		O	15	3
unnamed stream	3-00040	4	0.0 - 0.9	0.4		M	30	6
unnamed stream	4-0020	4	0.0 - 0.5	0.2		O	15	3
Berton Bay	2-000420	12	0.0 - 6.1	3,050.0	Yes*	U	1,525,000	381,250
McIntosh Run	2-000420	11	6.1 - 7.6	2.9		O	1,160	203
McIntosh Run	2-000420	7	7.6 -10.1	3.3		O	495	125
McIntosh Run	2-000420	4	10.1 -11.0	0.9		O	68	14
Burnt Mill Creek	3-00250	4	0.0 - 2.0	1.9		O	143	29
Brooks Run	3-00260	4	0.0 - 1.4	1.4		O	105	21
Nomini Bay	2-000430	12	0.0 - 2.2	3,800.0		U	1,900,000	475,000
Nomini Creek	2-000430	12	2.2 - 5.5	1,140.0		U	570,000	142,500
Nomini Creek	2-000430	11	5.5 - 8.1	311.3		U	184,520	21,791
Nomini Creek	2-000430	4	8.1 - 8.4	0.3		U	23	5
Pierce Creek	3-00140	12	0.0 - 0.8	60.0		U	30,000	7,500

Table 9, page 5

Pierce Creek	3-00140	4	0.8 - 2.2	1.0		O	75	15
unnamed stream	4-0020	4	0.0 - 0.6	0.4		U	30	6
unnamed stream	3-00180	4	0.0 - 1.7	1.8		U	135	27
unnamed stream	4-0020	4	0.0 - 1.6	1.9		U	143	29
unnamed stream	3-00210	4	0.0 - 1.0	1.5		U	113	23
Beals Pond		R	1.0 - 1.6	74.4				
unnamed stream	3-00210	4	1.6 - 3.2	1.9		U	143	29
unnamed stream	4-0030	4	0.0 - 0.6	1.0		M	75	15
unnamed stream	4-0050	4	0.0 - 1.0	1.9		U	143	29
St. Clements Bay	2-000440	12	0.0 - 6.0	3,300.0		U	1,650,000	412,500
St. Clements Creek	2-000440	11	6.0 - 6.9	1.7		O	680	119
St. Clements Creek	2-000440	4	6.9 - 9.9	2.9		O	218	44
Wicomico River	2-000460	12	0.0 - 10.5	9,500.0	Yes*	U	4,750,000	1,187,500
Wicomico River	2-000460	11	10.5 - 12.5	1,120.0		U	448,000	78,400
Allens Fresh	2-000460	11	12.5 - 15.4	169.7		O	67,880	11,879
Zekiah Swamp	2-000460	7	15.4 - 27.5	38.0		O	5,700	1,444
Zekiah Swamp	2-000460	4	27.5 - 32.7	4.2		M	315	63
Wolf Den Branch	2-000460	4	32.7 - 34.0	1.3		U	98	20
Chaptico Bay	3-00120	12	0.0 - 2.0	740.0		U	370,000	92,500
Chaptico Creek	3-00120	11	2.0 - 3.6	1.6		O	640	112
Chaptico Creek	3-00120	4	3.6 - 6.6	2.9		O	218	44
Coffee Hill Run	4-0070	4	0.0 - 2.2	2.1		U	158	32
Gilbert Swamp Run	3-00160	11	0.0 - 2.0	3.9		O	1,560	273
Gilbert Swamp Run	3-00160	7	2.0 - 3.0	1.0		U	150	38
Gilbert Swamp Run	3-00160	4	3.0 - 4.8	1.7		U	128	26

Table 9, page 6

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.) TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Clark Run	3-00230	4	0.0 - 2.0	1.9		U	143	29
Kerrick Swamp	3-00340	4	0.0 - 3.5	3.4		U	255	51
Piney Branch	3-00390	4	0.0 - 0.5	0.5		U	38	8
Mill Dam Run	3-00420	4	0.0 - 1.0	1.0		U	75	15
Jordan Swamp	3-00430	4	0.0 - 2.5	2.4		U	180	36
Devils Nest	3-00440	4	0.0 - 1.0	1.0		U	75	15
Zekiah Swamp	3-00480	4	0.0 - 1.5	1.4		U	105	21
Popes Creek	2-000470	11	0.0 - 2.5	242.9		U	97,160	17,003
Popes Creek	2-000470	7	2.5 - 3.2	1.4		U	210	53
Popes Creek	2-000470	4	3.2 - 3.5	0.1		O	8	2
Potomac Mills Pond		P	3.5 - 3.8	37.2				
Popes Creek	2-000470	4	3.8 - 4.4	0.5		O	38	8
Canal Swamp	3-00010	4	0.0 - 1.2	0.3		U	23	5
Mattox Creek	2-000490	12	0.0 - 4.1	620.0	Yes*	U	310,000	77,500
Mattox Creek	2-000490	7	4.1 - 6.9	6.0		U	900	228
Mattox Creek	3-00120	7	0.0 - 0.5	0.6		O	90	23
Munroe Creek	2-000510	12	0.0 - 1.4	370.0	Yes*	U	185,000	46,250
Munroe Creek	3-00010	4	0.0 - 1.4	1.4		U	105	21
Cuckold Creek	2-000520	12	0.0 - 2.2	417.0		U	208,500	52,125
Rosier Creek	2-000530	11	0.0 - 2.7	161.9		U	64,760	11,333
Piscowaxen Creek	2-000540	12	0.0 - 0.9	75.0		U	37,500	9,375
Machadoc Creek	2-000550	11	0.0 - 5.5	1,250.0		U	500,000	87,500
Machadoc Creek	2-000550	7	5.5 - 8.0	50.0		U	7,500	1,900

Table 9, page 7

Machadoc Creek	2-000550	4	8.0 - 13.6	12.4	O	930	186
Williams Creek	3-00020	11	0.0 - 2.5	112.3	U	44,920	7,861
Gambo Creek	2-000570	7	0.0 - 2.8	35.1	M	5,265	1,334
Port Tobacco River	2-000620	11	0.0 - 5.0	1,370.0	U	748,000	130,900
Port Tobacco River	2-000620	4	5.0 - 7.0	1.9	O	143	29
Jotank Creek	2-000630	11	0.0 - 2.5	90.0	U	36,000	6,300
Nanjemoy Creek	2-000640	11	0.0 -10.4	2,300.0	U	920,000	161,000
Nanjemoy Creek	2-000640	4	10.4 -11.6	3.8	O	285	57
Avon River	3-00040	11	0.0 - 2.5	140.0	U	56,000	9,800
Mill Run	3-00040	11	2.5 - 3.3	0.8	O	320	56
Hilltop Fork	3-00060	11	0.0 - 0.5	125.0	U	50,000	8,750
Wards Run	3-00060	11	0.5 - 2.5	8.0	O	3,200	560
Wards Run	3-00060	4	2.5 - 4.2	3.5	U	263	53
Potomac Creek	2-000710	11	0.0 - 5.2	1,430.0	U	572,000	100,100
Potomac Creek	2-000710	7	5.2 -11.9	21.4	U	3,210	813
Potomac Creek	2-000710	4	11.9 -15.6	3.9	O	293	59
Accakeek Creek	3-00020	11	0.0 - 2.2	170.0	M	68,000	11,900
Accakeek Creek	3-00020	4	2.2 - 8.6	6.3	M	473	95
Aquia Creek	2-000730	11	0.0 - 6.0	1,370.0	U	548,000	95,900
Aquia Creek	2-000730	7	6.0 -13.0	21.4	U	3,210	813
Aquia Creek	2-000730	4	13.0 -17.0	3.8	U	285	57
Chopawansic Creek	2-000790	11	0.0 - 4.2	125.0	U	50,000	8,750
Chopawansic Creek	2-000790	4	4.2 - 6.7	8.1	U	608	122
Quantico Creek	2-000810	11	0.0 - 3.2	690.0	U	276,000	48,300
Quantico Creek	2-000810	4	3.2 - 6.2	5.8	O	435	87

Table 9, page 8

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Chicamuxen Creek	2-000820	11	0.0 - 3.0	530.0		U	212,000	37,100
Powells Creek	2-000830	11	0.0 - 2.0	150.0		U	60,000	10,500
Powells Creek	2-000830	4	2.0 - 12.0	18.4		U	1,380	276
Mattawoman Creek	2-000840	11	0.0 - 7.3	1,930.0		U	772,000	135,100
Mattawoman Creek	2-000840	7	7.3 - 24.8	53.6		M	8,040	2,037
Old Womans Run	3-00260	4	0.0 - 2.0	1.9		U	143	29
Piney Branch	3-00340	4	0.0 - 1.7	1.7		U	128	26
Neabsco Creek	2-000850	11	0.0 - 2.4	400.0		U	160,000	28,000
Neabsco Creek	2-000850	4	2.4 - 10.5	10.7		M	803	161
Occoquan Bay	2-000870	11	0.0 - 4.8	4,527.0	Yes #	U	1,810,800	316,890
Occoquan Creek	2-000870	11	4.8 - 6.9	101.7	Yes #	U	40,680	7,119
Occoquan Reservoir		R	6.9 - 25.1	1,700.0				
Lake Jackson		R	25.1 - 31.3	380.0				
Broad Run	2-000870	6	31.3 - 44.8	35.6		U	5,340	1,068
Broad Run	2-000870	4	44.8 - 63.5	32.8		M	2,460	492
Bull Run	3-00220	R	0.0 - 4.6	-				
Bull Run	3-00220	7	4.6 - 14.6	38.1	Yes #	O	5,715	1,448
Bull Run	3-00220	5	14.6 - 18.8	8.7	Yes #	M	957	191
Bull Run	3-00220	4	18.8 - 25.2	5.0		M	375	75
Popes Head Creek	4-0120	4	0.0 - 6.0	5.8		O	435	87
Cub Run	4-0180	5	0.0 - 6.2	19.8	Yes #	U	2,178	436
Cub Run	4-0180	4	6.2 - 7.2	1.9	Yes #	O	143	29
Rocky Run	5-0040	4	0.0 - 3.2	3.0		O	225	45

Table 9, page 9

Little Bull Run	4-0390	4	0.0 - 4.7	4.5		O	338	68
Cedar Run	3-00350	R	0.0 - 3.5					
Cedar Run	3-00350	4	3.5 -30.5	65.2		O	4,890	978
Kettle Run	3-00370	4	0.0 - 5.6	5.3		M	398	80
Pumonkey Creek	2-000880	11	0.0 - 2.0	110.0		M	44,000	7,700
Gunston Bay	2-000890	11	0.0 - 3.8	1,597.0		U	638,800	111,790
Pohick Creek	2-000890	6	3.8 - 7.4	11.0		O	1,650	330
Pohick Creek	2-000890	4	7.4 -14.1	12.6		O	945	189
Accotink Bay	3-00020	11	0.0 - 1.1	275.0	Yes #	U	82,500	14,438
Accotink Creek	3-00020	7	1.1 -11.8	35.0	Yes #	O	3,938	998
Fort Belvoir Reservoir		R	11.8 -13.0	77.0				
Accotink Creek	3-00020	4	13.0 -19.8	7.1	Yes #	O	533	107
Dogue Creek	2-000910	11	0.0 - 1.8	459.0		U	183,600	32,130
Little Hunting Creek	2-000930	11	0.0 - 1.9	110.0		U	44,000	7,700
Piscataway Creek	2-000940	11	0.0 - 4.1	836.0	Yes #	U	250,500	43,890
Piscataway Creek	2-000940	7	4.1 - 9.2	9.9	Yes #	U	1,485	376
Piscataway Creek	2-000940	4	9.2 -11.4	2.1		U	158	32
Tinkers Creek	3-00070	7	0.0 - 1.7	3.3	Yes #	M	495	125
Tinkers Creek	3-00070	4	1.7 - 3.0	1.3		U	98	20
Swan Creek	2-000960	11	0.0 - 0.9	38.0	Yes #	U	15,200	2,660
Broad Creek	2-000980	11	0.0 - 2.5	350.0	Yes #	M	105,000	18,375
Henson Creek	2-000980	4	2.5 - 8.6	4.9		O	368	74
Hunting Creek	2-001010	11	0.0 - 3.5	597.0	Yes #	U	179,100	31,343
Holmes Run	2-001010	4	3.5 - 8.5	59.2	Yes #	U	2,220	444
Lake Barcroft		R	8.5 - 10.1	150.0				
Holmes Run	2-001010	4	10.1 - 12.3	4.6	Yes #	O	345	69

Table 9, page 10

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Tripps Run	3-00220	4	0.0 - 1.6	1.9	Yes #	O	143	29
Oxon Creek	2-001020	11	0.0 - 0.9	138.0		U	55,200	9,660
Oxon Run	2-001020	4	0.9 - 1.9	1.0		U	75	15
Anacostia River	2-001040	11	0.0 - 6.6	560.0	Yes #	U	112,000	19,600
Anacostia River	2-001040	10	6.6 - 8.6	6.6	Yes #	M	990	248
North East Branch	2-001040	5	8.6 - 11.6	9.5		U	1,045	209
Indian Creek	2-001040	4	11.6 - 13.1	1.4		U	105	21
Northwest Branch	3-00150	4	0.0 - 10.5	10.0		O	750	150
unnamed pond		P	10.5 - 11.2	24.8				
Northwest Branch	3-00150	4	11.2 - 17.4	6.0		U	450	90
Paint Branch	3-00250	4	0.0 - 2.5	2.4		U	180	36
Rock Creek	2-001080	5	0.0 - 11.3	22.0	Yes #	M	2,420	484
Rock Creek	2-001080	4	11.3 - 25.6	13.5	Yes #	O	1,013	203
North Branch	3-00380	4	0.0 - 2.8	2.7		O	203	41
Pemmit Run	2-001190	4	0.0 - 1.6	1.6	Yes #	O	60	12
Cabin John Creek	2-001260	5	0.0 - 5.0	9.7	Yes #	O	1,067	213
Rock Run	2-001300	4	0.0 - 2.5	2.4		O	180	36
Difficult Run	2-001410	6	0.0 - 8.8	27.8		O	4,170	834
Difficult Run	2-001410	4	8.8 - 13.8	4.8		O	360	72
Little Difficult Run	3-00160	4	0.0 - 1.5	1.5		O	113	23
Watts Branch	2-001480	4	0.0 - 0.5	1.2		U	90	18
Watts Branch	3-00020	4	0.0 - 3.0	7.3		U	548	110

Table 9, page 11

Piney Branch	4-0030	4	0.0 - 2.0	4.8	O	360	72
Muddy Branch	2-001520	5	0.0 - 3.5	17.0	O	1,870	374
Muddy Branch	2-001520	4	3.5 - 7.0	8.5	U	638	128
Seneca Creek	2-001540	6	0.0 - 1.5	10.9	O	1,635	327
Great Seneca Creek	2-001540	5	1.5 - 13.0	55.8	M	6,138	1,228
Great Seneca Creek	2-001540	4	13.0 - 18.5	13.3	U	998	200
Dry Seneca Creek	3-00030	5	0.0 - 2.0	9.7	M	1,067	213
Dry Seneca Creek	3-00030	4	2.0 - 4.5	6.1	U	458	92
Little Seneca Creek	3-00090	5	0.0 - 4.5	21.8	M	2,398	480
Little Seneca Creek	3-00090	4	4.5 - 8.0	8.4	U	630	126
Bucklodge Creek	4-0030	4	0.0 - 2.0	4.8	U	360	72
Tenmile Creek	4-0130	4	0.0 - 3.0	7.3	O	548	110
Horsepen Branch	2-001600	4	0.0 - 1.0	2.4	O	180	36
Beaverdam Run	2-001610	8	0.0 - 1.5	10.9	O	1,908	480
Beaverdam Run	2-001610	5	1.5 - 4.0	17.0	O	1,870	374
Broad Run	3-00030	4	4.0 - 11.5	18.2	U	1,365	273
Goose Creek	2-001630	6	0.0 - 6.5	141.2	O	21,180	4,236
Goose Creek Reservoir		R	6.5 - 7.0	140.0			
Goose Creek	2-001630	6	7.0 - 21.0	21.8	O	3,270	654
Goose Creek	2-001630	5	21.0 - 30.0	43.7	U	4,807	961
Goose Creek	2-001630	4	30.0 - 40.5	25.5	O	1,913	383
Tuscarora Creek	3-00040	4	0.0 - 4.0	9.7	O	728	146
Sycoline Creek	-00060	4	0.0 - 4.0	9.6	O	720	144
Little River	3-00310	5	0.0 - 1.5	7.3	O	803	161
Little River	3-00310	4	1.5 - 9.5	19.3	M	1,448	290
Beaverdam Creek	3-00400	5	0.0 - 1.5	7.3	O	803	161

Table 9, page 12

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
North Fork Goose Creek	3-00400	4	1.5 - 6.5	12.1		U	908	182
Beaverdam Creek	4-0050	4	0.0 - 5.5	13.3		U	998	200
Cromwells Run	3-00630	4	0.0 - 2.0	4.8		U	360	72
Panther Skin Creek	3-00700	4	0.0 - 3.5	8.5		O	638	128
Crooked Run	3-00940	4	0.0 - 2.0	4.8		U	360	72
Kettle Run	3-00960	2	0.0 - 2.0	2.4		U	120	19
Broad Run	2-001640	4	0.0 - 2.5	6.1		O	458	92
Monocacy River	2-001760	9	0.0 - 34.5	709.0	Yes #	U	126,800	31,700
Monocacy River	2-001760	6	34.5 - 46.0	165.4		U	24,810	4,962
Monocacy River	2-001760	5	46.0 - 51.0	24.2		O	2,662	532
Monocacy River	2-001760	8	51.0 - 53.0	14.5		M	2,538	638
Rock Creek	2-001760	4	53.0 - 70.5	36.7	Yes #	U	2,340	468
Bennett Creek	3-00040	5	0.0 - 7.5	36.4		U	4,004	801
Bennett Creek	3-00040	4	7.5 - 12.0	13.0		U	975	195
Ballenger Creek	3-00130	4	0.0 - 2.0	4.8		O	360	72
Bush Creek	3-00160	4	0.0 - 10.5	25.5		U	1,913	383
Linganore Creek	3-00200	6	0.0 - 5.0	30.3		M	4,545	909
Linganore Creek	3-00200	5	5.0 - 11.5	31.6		U	3,476	695
South Fork	3-00200	4	11.5 - 16.5	12.1		U	908	182
North Fork	4-0190	4	0.0 - 5.0	12.0		U	900	180
Talbot Branch	5-0020	4	0.0 - 3.0	7.3		U	548	110
Woodville Branch	4-0220	4	0.0 - 2.0	4.8		U	360	72
Rock Creek	3-00210	4	0.0 - 3.0	7.3		O	548	110

Table 9, page 13

Israel Creek	3-00240	5	0.0 - 4.0	19.4	U	2,134	427
Israel Creek	3-00240	4	4.0 - 9.0	12.1	U	908	182
Little Israel Creek	4-0060	4	0.0 - 2.0	4.8	U	360	72
Tuscarora Creek	3-00250	4	0.0 - 4.5	10.9	O	818	164
Tuscarora Creek	3-00250	1	4.5 - 7.5				
Tuscarora Creek	3-00250	2	7.5 -10.0	3.0	U	150	24
Fishing Creek	3-00290	5	0.0 - 2.0	12.1	O	1,331	266
Fishing Creek	3-00290	4	2.0 - 9.0	10.5	U	788	158
Fishing Creek	3-00290	3	9.0 -15.0	10.9	O	763	153
Little Fishing Creek	4-0140	2	0.0 - 3.0	3.6	O	180	29
Hunting Creek	3-00310	5	0.0 - 6.0	29.1	M	3,201	640
Hunting Creek	3-00310	3	6.0 -10.5	8.2	O	574	115
Hunting Creek	3-00310	2	10.5 -12.0	2.4	O	120	19
Little Hunting Creek	4-0070	5	0.0 - 1.0	2.4	O	264	53
Little Hunting Creek	4-0070	4	1.0 - 3.0	3.0	U	225	45
Little Hunting Creek	4-0070	3	3.0 - 6.5	6.4	O	448	90
Little Hunting Creek	4-0070	2	6.5 - 8.0	1.8	U	90	14
Owens Creek	3-00350	5	0.0 - 6.5	31.5	M	3,465	693
Owens Creek	3-00350	1	6.5 -10.0				
Owens Creek	3-00350	3	10.0 -12.0	3.6	O	252	50
Owens Creek	3-00350	2	12.0 - 15.5	4.2	O	210	34
Beaver Branch	4-0040	4	0.0 - 3.0	7.3	U	548	110
Big Pipe Creek	3-00360	6	0.0 - 10.5	76.4	O	11,460	2,292
Big Pipe Creek	3-00360	5	10.5 - 20.5	48.5	U	5,335	1,067
Big Pipe Creek	3-00360	4	20.5 - 25.0	10.5	U	788	158

Table 9, page 14

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.) TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Little Pipe Creek	4-0020	5	0.0 - 9.0	43.6		O	4,796	959
Little Pipe Creek	4-0020	4	9.0 - 12.5	8.5		U	638	128
Sams Creek	5-0120	4	0.0 - 3.0	7.3		O	548	110
Clemsons Branch	6-0060	4	0.0 - 1.5	3.6		U	270	54
Silver Run	4-0210	4	0.0 - 4.0	9.7		U	728	146
Stoney Branch	3-00370	4	0.0 - 1.0	2.4		U	180	36
Toms Creek	3-00390	6	0.0 - 4.5	27.3		M	4,095	819
Toms Creek	3-00390	5	4.5 - 7.5	14.5		O	1,595	319
Toms Creek	3-00390	4	7.5 - 10.5	3.5		U	263	53
Toms Creek	3-00390	3	10.5 - 17.0	11.8		O	826	165
Middle Creek	4-0020	5	0.0 - 9.5	18.0		O	1,980	396
Middle Creek	4-0020	2	9.5 - 14.0	1.4		O	70	11
Friends Creek	4-0110	2	0.0 - 6.0	6.6		O	330	53
Miney Branch	4-0130	2	0.0 - 5.5	5.0		U	250	40
Piney Creek	3-00400	5	0.0 - 5.0	24.2		U	2,662	532
Piney Creek	3-00400	4	5.0 - 12.0	17.0		U	1,275	255
Piney Creek	3-00400	2	12.0 - 12.5	0.5		U	25	4
Alloway Creek	3-00420	4	0.0 - 4.0	8.4		O	630	126
Marsh Creek	3-00430	4	0.0 - 16.5	30.0		O	2,250	450
Marsh Creek	3-00430	1	16.5 - 32.5					
Marsh Creek	3-00430	2	32.5 - 37.0	1.4		O	70	11
Little Marsh Creek	4-0150	2	0.0 - 7.5	6.8		O	340	54
White Run	3-00540	4	0.0 - 1.0	1.8		U	135	27

Table 9, page 15

Tuscarora Creek	2-001780	4	0.0 - 3.5	8.5		O	638	128
Catoctin Creek	2-001810	8	0.0 - 0.5	3.0	—	U	525	132
Catoctin Creek	2-001810	5	0.5 - 9.0	43.6		U	4,796	959
South Fork	2-001810	4	9.0 - 11.0	4.8		U	360	72
North Fork	3-00180	4	0.0 - 3.0	7.3		U	548	110
Catoctin Creek	2-001820	6	0.0 - 1.5	10.1		O	1,515	303
Catoctin Creek	2-001820	5	1.5 - 21.5	97.0		O	10,670	2,134
Middle Creek	2-001820	3	21.5 - 28.0	11.8		M	826	165
Middle Creek	2-001820	2	28.0 - 32.0	4.8		O	240	38
Broad Run	3-00070	4	0.0 - 3.0	7.3		U	548	110
Little Catoctin Creek	3-00140	4	0.0 - 2.5	6.1		U	458	92
Grindstone Run	3-00230	4	0.0 - 2.5	6.1		U	458	92
Catoctin Creek	3-00250	2	0.0 - 2.5	3.0		U	150	24
Little Catoctin Creek	2-001840	4	0.0 - 3.5	8.5		U	638	128
Semples Run	2-001900	4	0.0 - 5.5	10.9		O	818	164
Piney Run	2-001910	4	0.0 - 4.0	9.7		U	728	146
Shenandoah River	2-001930	9	0.0 - 55.0	1,654.7	Yes#	M	301,470	75,368
South Fork	2-001930	6	55.0 - 150.2	2,440.0		U	336,000	73,200
North River	2-001930	6	150.2 - 166.7	158.0		U	23,700	4,740
North River	2-001930	5	166.7 - 170.6	4.8	Yes#	O	457	91
North River	2-001930	4	170.6 - 182.6	29.0		U	2,175	435
North River	2-001930	3	182.6 - 189.6	25.5		O	1,785	357
Staunton Dam		P	189.6 - 190.1	31.0				
North River	2-001930	2	190.1 - 196.1	7.3		O	365	58

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WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.) TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Flowing Spring Run	3-00020	1	0.0 - 4.0					
Flowing Spring Run	3-00020	2	4.0 - 5.5	1.5		O	75	12
Cattail Run	3-00040	2	0.0 - 1.0	1.0		O	50	8
Evitts Run	3-00080	4	0.0 - 2.0	6.1		O	458	92
Evitts Run	3-00080	2	2.0 - 9.5	13.6		O	680	109
Bullskin Run	3-00120	2	0.0 - 7.0	7.0		O	350	56
North Fork	4-0040	2	0.0 - 1.0	1.0		O	50	8
Long Marsh Run	3-00140	1	0.0 - 1.0					
Long Marsh Run	3-00140	2	1.0 - 2.5	1.5		O	75	12
Chapel Run	3-00380	4	0.0 - 1.5	3.6		U	270	54
Morgan Mill Run	3-00390	2	0.0 - 2.0	2.4		U	120	19
Mercer Run	4-0020	2	0.0 - 1.5	1.8		U	90	14
Spout Run	3-00400	4	0.0 - 1.5	3.6		O	270	54
Crooked Run	3-00600	4	0.0 - 2.0	4.8		O	360	72
North Fork Shenandoah	3-00620	6	0.0 -90.0	1,229.0		M	184,350	36,870
North Fork Shenandoah	3-00620	5	90.0 -93.0	14.5		O	1,595	319
North Fork Shenandoah	3-00620	4	93.0 -97.0	12.6		U	945	189
North Fork Shenandoah	3-00620	3	97.0 -106.5	23.0		U	1,610	322
North Fork Shenandoah	3-00620	2	106.5 -109.5	3.6		U	180	29
Passage Creek	4-0070	5	0.0 - 9.5	46.1		O	5,071	1,014
Passage Creek	4-0070	4	9.5 - 15.5	14.5		O	1,088	218
Passage Creek	4-0070	2	15.5 - 23.0	9.1		U	455	73
West Branch	4-0070	2	23.0 - 27.0	4.8		O	240	38

Table 9, page 17

Little Passage Creek	5-0180	2	0.0 - 2.0	2.4		0	120	19
Mine Run	5-0200	2	0.0 - 2.0	2.4		U	120	19
Mill Run	5-0320	2	0.0 - 3.0	3.6		0	180	29
East Branch	5-0650	2	0.0 - 2.5	3.0		U	150	24
Cedar Creek	4-0080	5	0.0 - 14.5	70.3		0	7,733	1,547
Cedar Creek	4-0080	4	14.5 - 19.5	12.1		0	908	182
Cedar Creek	4-0080	2	19.5 - 32.0	15.2		0	760	122
Turkey Run	5-0150	4	0.0 - 2.0	4.8		U	360	72
Furnace Run	5-0280	2	0.0 - 2.5	3.0		U	150	24
Falls Run	6-0010	2	0.0 - 2.0	2.4		U	120	19
Duck Run	5-0300	2	0.0 - 3.0	3.6		U	180	29
Paddy Run	5-0540	2	0.0 - 3.0	5.5		0	275	44
Tumbling Run	4-0140	4	0.0 - 1.0	2.4		0	180	36
Passage Creek	4-0280	4	0.0 - 3.0	7.3		0	548	110
Stoney Creek	4-0300	4	0.0 - 3.0	10.1		U	758	152
Stoney Creek	4-0300	3	3.0 - 16.0	23.6		0	1,652	330
Stoney Creek	4-0300	2	16.0 - 22.5	7.9		U	395	63
May Spring Run	5-0120	2	0.0 - 1.0	1.2		U	60	10
Little Stoney Run	5-0160	2	0.0 - 2.0	2.4		0	120	19
Mill Creek	6-0010	2	0.0 - 1.0	1.2		U	60	10
Riles Run	5-0170	2	0.0 - 1.0	1.2		U	60	10
Laurel Run	5-0180	2	0.0 - 2.0	2.4		U	120	19
Alum Run	5-0260	2	0.0 - 2.0	2.4		U	120	19
Mill Creek	4-0420	4	0.0 - 12.0	29.0	Yes #	0	2,091	418
Smith Creek	4-0430	5	0.0 - 1[illegible]	87.3		0	9,603	1,921

Table 9, page 18

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Smith Creek	4-0430	4	16.5 - 22.5	14.5		O	1,088	218
War Branch	5-0250	4	0.0 - 3.0	7.3		U	548	110
Smith Creek	5-0290	1						
Fridley Run	6-0120	2	0.0 - 2.0	2.4		O	120	19
Holmans Creek	4-0460	4	0.0 - 2.0	4.8		O	360	72
Honey Run	4-0540	4	0.0 - 0.5	1.2		U	90	18
Linville Creek	4-0570	5	0.0 - 3.0	7.3		O	803	161
Linville Creek	4-0570	4	3.0 - 6.0	7.3		O	548	110
Sours Run	4-0620	4	0.0 - 1.0	2.4		U	180	36
Sours Run	4-0620	2	1.0 - 3.5	3.0		U	150	24
Shoemaker River	4-0630	4	0.0 - 4.0	9.7		O	728	146
Slatelick Branch	5-0040	2	0.0 - 1.0	1.2		U	60	10
Hogpen Run	5-0060	2	0.0 - 1.5	1.8		U	90	14
Long Run	5-0080	2	0.0 - 2.5	3.0		O	150	24
Little Dry River	4-0670	4	0.0 - 1.0	2.4		U	180	36
Little Dry River	4-0670	2	1.0 - 7.0	7.3		O	365	58
Bible Run	5-0050	2	0.0 - 2.0	2.4		U	120	19
Carr Run	5-0060	2	0.0 - 1.0	1.2		U	60	10
Marshall Run	4-0710	2	0.0 - 2.0	2.4		U	120	19
Lairs Run	4-0730	2	0.0 - 2.0	2.4		U	120	19
Pewee Run	4-0780	2	0.0 - 1.0	1.2		U	60	10
Bennett Run	4-0820	2	0.0 - 3.0	3.6		U	180	29
Crab Run	5-0020	2	0.0 - 2.0	2.4		U	120	19

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Sirks Run	6-0030	2	0.0 - 2.0	2.4		0	120	19
Overly Run	5-0040	2	0.0 - 1.0	1.2		U	60	10
Coldspring River	4-0940	2	0.0 - 1.0	1.2		U	60	10
Camp Rader Run	4-1020	2	0.0 - 1.0	1.2		U	60	10
Gooney River	3-00770	4	0.0 - 2.0	4.8		0	360	72
Gooney River	3-00770	2	2.0 - 6.0	4.8		0	240	38
Jeremys Run	3-00990	4	0.0 - 1.0	2.4		U	180	36
Jeremys Run	3-00990	1	1.0 - 5.0					
Jeremys Run	3-00990	2	5.0 - 8.0	3.6		U	180	29
Hawksbill Creek	3-01030	4	0.0 - 5.5	10.9	Yes #	0	649	130
East Hawksbill Creek	4-0070	1	0.0 - 5.0					
East Hawksbill Creek	4-0070	2	5.0 - 7.5	3.0		U	150	24
Little Hawksbill Creek	4-0190	2	0.0 - 2.5	3.0		0	150	24
Big Run	3-01080	1						
Mountain Run	4-0020	2	0.0 - 1.0	1.2		U	60	10
Cub Run	3-01220	1	0.0 - 2.5					
Cub Run	3-01220	2	2.5 - 5.5	3.6		0	180	29
Pitt Spring Run	4-0040	2	0.0 - 2.0	2.4		0	120	19
Naked Creek	3-01430	4	0.0 - 4.0	9.7		0	728	146
Naked Creek	3-01430	2	4.0 - 7.0	5.5		0	275	44
East Branch	3-01430	2	7.0 - 8.5	1.8		U	90	14
South Branch	4-0080		0.0 - 4.5	5.5		U	275	44
West Branch	4-0110	2	0.0 - 1.5	1.8		U	90	14
Boone Run	3-01480	1	0.0 - 5.0					
Boone Run	3-01480	2	5.0 - 7.5	3.0		0	150	24

Table 9, page 20

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Elk Run	3-01510	4	0.0 - 2.0	4.8		O	360	72
Cub Run	3-01700	4	0.0 - 2.5	6.1		O	458	92
South River	3-01830	6	0.0 - 24.5	171.0	Yes#	M	6,413	1,283
South River	3-01830	5	24.5 - 29.5	24.2		U	2,662	532
South River	3-01830	4	29.5 - 40.5	26.7	Yes#	M	1,965	393
Paine Run	4-0090	1	0.0 - 3.0					
Paine Run	4-0090	2	3.0 - 5.0	2.4		O	120	19
Meadow Run	4-0130	1	0.0 - 3.0					
Meadow Run	4-0130	2	3.0 - 4.0	1.2		U	60	10
Sawmill Run	4-0230	4	0.0 - 0.5	1.2		U	90	18
Sawmill Run	4-0230	1	0.5 - 4.0					
Sawmill Run	4-0230	2	4.0 - 5.0	1.2		U	60	10
Back Creek	4-0290	5	0.0 - 1.0	4.8		O	528	106
Back Creek	4-0290	4	1.0 - 5.0	13.3		O	998	200
Back Creek	4-0290	3	5.0 - 9.0	14.5		U	1,015	203
North Fork	4-0290	2	9.0 - 10.5	3.6		O	180	29
Mill Creek	5-0060	1	0.0 - 3.0					
Mill Creek	5-0060	2	3.0 - 6.0	2.4		O	120	19
Mecombs Creek	5-0070	2	0.0 - 1.0	1.2		U	60	10
South Fork	5-0110	2	0.0 - 1.5	3.6		O	180	29
Kennedy Creek	4-0390	1	0.0 - 3.0					
Kennedy Creek	4-0390	2	3.0 - 5.0	2.4		O	120	19
Coles Run	4-0410	1	0.0 - 4.0					

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Coles Run	4-0410	2	4.0 - 6.0	2.4		O	120	19
Johns Run	4-0430	1	0.0 - 2.0					
Johns Run	4-0430	2	2.0 - 4.0	2.4		O	120	19
Loves Run	4-0450	1	0.0 - 1.0					
Loves Run	4-0450	2	1.0 - 3.0	2.4		O	120	19
Stoney Run	5-0010	1	0.0 - 1.0					
Stoney Run	5-0010	2	1.0 - 3.0	2.4		M	120	19
Pine Run	4-0510	1						
Cold Spring Run	5-0010	1	0.0 - 2.0					
Cold Spring Run	5-0010	2	2.0 - 4.0	2.4		M	120	19
Poor Creek	4-0530	4	0.0 - 1.0	2.4		U	180	36
Congors Creek	3-01840	4	0.0 - 2.2	6.0		O	450	90
Middle River	3-01870	6	0.0 - 14.0	135.0		U	20,250	4,050
Middle River	3-01870	5	14.0 - 40.0	176.6		U	19,426	3,885
Middle River	3-01870	4	40.0 - 50.0	24.2		O	1,815	363
Christian Creek	4-0110	5	0.0 - 11.0	53.3		U	5,863	1,173
Christian Creek	4-0110	4	11.0 - 22.0	26.6		M	1,995	399
Meadow Run	5-0010	4	0.0 - 2.0	4.8		O	360	72
Barterbrook Branch	5-0250	4	0.0 - 2.0	4.8		O	360	72
Folly Mills	5-0260	4	0.0 - 2.5	6.0		O	450	90
Lewis Creek	4-0170	4	0.0 - 4.0	9.7	Yes#	U	364	73
Moffett Creek	4-0360	4	0.0 - 3.0	7.3		U	548	110
Moffett Creek	4-0360	1	3.0 - 10.0					
Moffett Creek	4-0360	2	10.0 - 12.0	2.4		U	120	19
Jennings Creek	4-0400	4	0.0 - 1.0	2.4		U	180	36

Table 9, page 22

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Jennings Creek	4-0400	1	1.0 - 7.0					
Jennings Creek	4-0400	2	7.0 - 10.0	3.6		U	180	29
Whiskey Creek	5-0030	2	0.0 - 1.0	2.4		U	120	19
Buffalo Creek	4-0420	1						
East Dry Branch	5-0040	1	0.0 - 4.0					
East Dry Branch	5-0040	2	4.0 - 6.5	3.0		O	150	24
Falls Hollow	5-0100	2	0.0 - 2.0	2.4		O	120	19
Edison Creek	4-0450	4	0.0 - 2.0	4.8		O	360	72
Back Creek	4-0470	4	0.0 - 1.5	3.6		O	270	54
Naked Creek	3-01950	4	0.0 - 3.0	7.3		M	548	110
Cooks Creek	3-02020	4	0.0 - 2.0	4.8	Yes #	O	270	54
Long Glade Creek	3-02050	4	0.0 - 3.5	8.4		M	630	126
Dry River	3-02060	4	0.0 - 7.5	18.2		O	1,365	273
Dry River	3-02060	3	7.5 - 16.5	21.8		O	1,526	305
Dry River	3-02060	2	16.5 - 21.5	6.0		U	300	48
Muddy Creek	4-0040	4	0.0 - 3.0	7.3		O	548	110
War Branch	5-0010	4	0.0 - 3.0	7.3		U	548	110
Black Run	4-0070	3	0.0 - 1.0	1.8		O	126	25
Black Run	4-0070	2	1.0 - 3.0	2.4		O	120	19
Rocky Run	4-0080	2	0.0 - 1.0	1.2		U	60	10
Kephart Run	4-0120	2	0.0 - 1.5	1.8		O	90	14
Dry Run	4-0170	2	0.0 - 1.5	1.8		U	90	14

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Skidmore Fork	4-0170	2	0.0 - 4.5	5.5		U	275	44
Laurel Run	4-0250	2	0.0 - 1.5	1.8		U	90	14
Mossy Creek	3-02090	4	0.0 - 3.0	7.2		M	540	108
Briery Branch	3-02100	4	0.0 - 5.0	12.0		U	900	180
Briery Branch	3-02100	2	5.0 - 10.0	9.0		O	450	72
Beaver Creek	4-0020	3	0.0 - 4.0	7.3		U	511	102
Wood Creek	4-0020	2	4.0 - 7.0	3.6		O	180	29
Home Quarry Run	4-0080	2	0.0 - 3.5	6.4		O	320	51
Mines Run	4-0120	2	0.0 - 2.0	2.4		O	120	19
Free Mason Run	3-02170	4	0.0 - 2.0	4.8		O	360	72
Little River	3-02200	2	0.0 - 4.0	4.8		U	240	38
Skidmore Fork	3-02220	2	0.0 - 1.5	1.8		U	90	14
White Oak Run	3-02270	2	0.0 - 1.5	1.8		U	90	14
Antietam Creek	2-001980	6	0.0 - 15.0	127.0		M	19,050	3,810
Antietam Creek	2-001980	5	15.0 - 29.5	69.4	Yes #	U	6,314	1,263
East Branch Antietam Creek	2-001980	3	29.5 - 40.0	18.2		O	1,274	255
East Branch Antietam Creek	2-001980	2	40.0 - 41.0	0.9		O	45	7
Little Antietam Creek	3-00100	4	0.0 - 3.5	8.5		U	638	128
Dog Creek	4-0070	4	0.0 - 2.0	4.8		U	360	72
Beaver Creek	3-00120	5	0.0 - 3.0	14.5		O	1,595	319
Beaver Creek	3-00120	4	3.0 - 6.0	7.3		O	548	110
Little Beaver Creek	4-0020	4	0.0 - 3.0	7.3		U	548	110
Marsh Run	3-00190	4	0.0 - 3.0	7.3	Yes #	O	411	82
Little Antietam Creek	3-00240	5	0.0 - 2.0	9.7		U	1,067	213
Little Antietam Creek	3-00240	4	2.0 - 7.0	12.0		O	900	180

Table 9, page 24

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
West Branch Antietam	3-00250	3	0.0 - 5.5	10.0		O	700	140
West Branch Antietam	3-00250	2	5.5 - 9.0	3.6		O	180	29
Five Forks Creek	4-0050	2	0.0 - 2.5	2.3		O	115	18
Red Run	3-00280	3	0.0 - 1.5	1.4		O	98	20
Red Run	3-00280	2	1.5 - 6.5	4.5		U	225	36
Saint James Run	2-002060	4	0.0 - 5.0	12.0		O	900	180
Rocky Marsh Run	2-002070	2	0.0 - 6.0	6.4		O	320	51
Opequon Creek	2-002090	5	0.0 - 39.5	243.7	Yes #	O	23,892	4,778
Opequon Creek	2-002090	4	39.5 - 52.5	31.5	Yes #	U	2,100	420
Tuscarora Creek	3-00140	4	0.0 - 3.0	5.5	Yes #	U	206	41
Tuscarora Creek	3-00140	2	3.0 - 8.0	2.5		O	125	20
Hopewell Run	3-00250	2	0.0 - 4.0	7.3		O	365	58
Leetown Run	4-0040	2	0.0 - 1.5	1.4		O	70	11
Middle Creek	3-00260	2	0.0 - 7.0	3.5		O	175	28
Mill Creek	3-00320	4	0.0 - 3.0	9.0		O	675	135
Mill Creek	3-00320	2	3.0 - 8.0	2.5		O	125	20
Turkey Run	3-00330	2	0.0 - 4.0	3.6		U	180	29
Abrams Creek	3-00580	4	0.0 - 2.0	4.8	Yes #	U	180	36
Conococheague Creek	2-002140	9	0.0 - 6.0	160.0	Yes #	U	30,650	7,663
Conococheague Creek	2-002140	6	6.0 - 24.0	266.0		M	39,900	7,980
West Branch Conococheague Creek	2-002140	5	24.0 - 28.5	19.1		O	2,101	420
West Branch Conococheague Creek	2-002140	4	28.5 - 56.0	149.7		O	11,228	2,246

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Mountain Lake		R	56.0 - 56.6	56.0				
West Branch Conococheague Creek	2-002140	3	56.6 - 70.1	48.0		M	3,360	672
West Branch Conococheague Creek	2-002140	2	70.1 - 72.6	3.2		O	160	26
Semple Run	3-00040	4	0.0 - 2.0	4.8		U	360	72
Rush Run	3-00100	4	0.0 - 2.0	5.0		U	375	75
Rockdale Run	3-00130	4	0.0 - 2.5	6.0		U	450	90
East Branch Conococheague Creek	3-00180	5	0.0 - 4.5	24.5	Yes #	O	2,021	404
East Branch Conococheague Creek	3-00180	4	4.5 - 13.0	36.0	Yes #	O	2,025	405
East Branch Conococheague Creek	3-00180	3	13.0 - 27.0	26.3	Yes #	O	1,211	242
unnamed pond		P	27.0 - 27.2	18.6				
East Branch Conococheague Creek	3-00180	3	27.2 - 40.7	22.8		O	1,596	319
Chambersburg Reservoir		R	40.7 - 41.6	53.0				
East Branch Conococheague Creek	3-00180	3	41.6 - 43.1	3.6		O	252	50
East Branch Conococheague Creek	3-00180	2	43.1 - 45.6	2.3		O	115	18
Muddy Run	4-0040	3	0.0 - 4.0	7.3		O	511	102
Muddy Run	4-0040	2	4.0 - 6.0	1.0		U	50	8
Back Creek	4-0090	4	0.0 - 10.5	19.0		M	1,425	285
Campbell Run	5-0030	4	0.0 - 4.0	1.2		O	90	18
Dennis Creek	5-0130	4	0.0 - 2.5	2.3		O	173	35
Falling Spring Branch	4-0200	3	0.0 - 4.5	8.2		O	574	115
Rocky Mountain Creek	4-0360	2	0.0 - 2.0	1.0		U	50	8

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WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Clean Run	5-0010	1						
Carbaugh Run	6-0080	3	0.0 - 3.5	7.3		M	511	102
Raccoon Creek	5-0050	2	0.0 - 2.5	1.0		U	50	8
Hosack Run	4-0370	2	0.0 - 1.0	1.0		U	50	8
Birch Run	4-0410	2	0.0 - 1.0	1.0		U	50	8
Little Licking Creek	3-00210	4	0.0 - 3.5	10.6		U	795	159
Buck Run	3-00270	3	0.0 - 2.0	3.6		O	252	50
Broad Run	3-00300	2	0.0 - 5.0	9.0		O	450	72
Dry Run	3-00430	2	0.0 - 1.5	2.7		O	135	22
Little Conococheague Creek	2-002160	5	0.0 - 1.5	7.3		U	803	161
Little Conococheague Creek	2-002160	4	1.5 - 7.5	14.4		U	1,080	216
Harland Run	2-002190	2	0.0 - 3.0	6.4		O	320	51
Green Spring Run	2-002200	4	0.0 - 1.0	1.2		U	90	18
Back Creek	2-002210	6	0.0 - 28.5	149.4		O	22,410	4,482
Back Creek	2-002210	5	28.5 - 34.5	29.0		M	3,190	638
Back Creek	2-002210	4	34.5 - 43.0	26.0	Yes #	M	1,725	345
Back Creek	2-002210	2	43.0 - 47.0	7.3	Yes #	O	315	50
Tilhance Creek	3-00040	2	0.0 - 3.0	2.4		O	120	19
Mill Run	3-00160	2	0.0 - 3.5	3.0		O	150	24
Babbs Run	3-00290	4	0.0 - 2.0	4.8		U	360	72
Hogue Creek	3-00330	4	0.0 - 7.5	27.3		M	2,048	410
Isaacs Creek	3-00340	4	0.0 - 2.5	6.0		O	450	90
Little Isaacs Creek	4-0040	4	0.0 - 2.5	6.0		U	450	90

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Licking Creek	2-002260	6	0.0 - 1.5	12.7		M	1,905	381
Licking Creek	2-002260	5	1.5 - 35.5	142.9		O	15,719	3,144
Licking Creek	2-002260	2	35.5 - 54.0	15.0		O	750	120
Little Cove Creek	3-00060	4	0.0 - 1.0	1.8		O	135	27
Little Cove Creek	3-00060	3	1.0 - 7.0	11.0		O	770	154
Cove Creek	3-00120	4	0.0 - 11.0	10.0		O	750	150
Cove Creek	3-00120	2	11.0 - 16.5	3.0		O	150	24
Spring Run	4-0060	4	0.0 - 3.0	5.5		O	413	83
Roaring Run	4-0110	2	0.0 - 4.5	4.0		O	200	32
Sleepy Creek	2-002270	6	0.0 - 13.0	71.0		M	10,650	2,130
Sleepy Creek	2-002270	5	13.0 - 26.5	41.0		M	4,510	902
Meadow Branch	3-00050	2	0.0 - 4.0	12.0		O	600	96
Mountain Run	3-00090	4	0.0 - 1.0	1.8		U	135	27
Middle Fork	3-00190	5	0.0 - 2.0	8.5		U	935	187
Breakneck Run	3-00360	2	0.0 - 3.0	2.7		U	135	22
Tonoloway Creek	2-002320	5	0.0 - 4.5	30.2	Yes #	M	2,492	498
Tonoloway Creek	2-002320	4	4.5 - 15.0	38.0		M	2,850	570
Little Tonoloway Creek	3-00050	4	0.0 - 9.0	21.8	Yes #	U	1,588	318
Barnetts Run	3-00150	2	0.0 - 3.0	2.7		O	135	22
Little Tonoloway Creek	2-002340	4	0.0 - 4.5	10.9		O	818	164
Sir Johns Run	2-002350	2	0.0 - 4.5	2.0		O	100	16
Cacapon River	2-002370	6	0.0 - 64.5	586.3		O	87,945	17,589
Lost River	2-002370	1	64.5 - 67.0					
Lost River	2-002370	6	67.0 - 77.0	57.3		M	8,595	1,719
Lost River	2-002370	5	77.0 - 90.5	73.6		U	8,096	1,619

Table 9. page 28

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.) TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
North River	3-00240	6	0.0 - 10.5	57.3		O	8,595	1,719
North River	3-00240	4	10.5 - 41.0	92.4		O	6,930	1,386
Hiett Run	4-0170	2	0.0 - 4.0	7.3		U	365	58
Meadow Run	4-0340	2	0.0 - 6.5	2.0		M	100	16
Grassy Lick Run	4-0360	2	0.0 - 7.0	3.0		O	150	24
Bloomery Run	3-00250	2	0.0 - 7.0	3.0		O	150	24
Cold Stream Run	3-00260	2	0.0 - 3.0	1.0		O	50	8
Edwards Run	3-00280	2	0.0 - 3.5	3.2		O	160	26
Dillons Run	3-00320	4	0.0 - 0.5	0.5		O	38	8
Dillons Run	3-00320	2	0.5 - 9.5	8.2		O	410	66
Mill Branch	3-00330	2	0.0 - 7.5	3.0		O	150	24
Capon Spring Run	3-00490	2	0.0 - 3.0	1.8		U	90	14
Moores Run	3-00560	2	0.0 - 2.0	1.8		O	90	14
Waites Run	3-00590	4	0.0 - 6.5	19.7		O	1,478	296
Waites Run	3-00590	2	6.5 - 8.5	2.7		U	135	22
Pond Run	4-0120	2	0.0 - 2.0	0.5		U	25	4
Trout Run	3-00610	2	0.0 - 6.5	17.2		O	860	138
Brushy Hollow	3-00650	2	0.0 - 5.0	3.0		U	150	24
Baker Run	3-00700	4	0.0 - 3.0	5.5		U	413	83
Kinsey Run	3-00780	4	0.0 - 2.0	3.6		O	270	54
Camp Branch	4-0020	2	0.0 - 2.0	1.0		O	50	8
Lower Cove Run	3-00830	2	0.0 - 2.5	1.5		O	75	12
Sideling Hill Creek	2-002420	5	0.0 - 20.0	71.0		O	7,810	1,562

Fifteen Mile Creek	2-002440	5	0.0 - 8.0	39.0	M	4,290	858
Little Cacapon River	2-002610	6	0.0 - 7.5	41.0	U	6,150	1,230
Little Cacapon River	2-002610	5	7.5 - 18.5	46.7	O	5,137	1,027
Little Cacapon River	2-002610	4	18.5 - 21.5	9.0	O	675	135
Town Creek	2-002620	5	0.0 - 17.0	103.0	U	11,330	2,266
Town Creek	2-002620	2	17.0 - 31.5	30.0	M	1,500	240
Flintstone Creek	3-00150	3	0.0 - 8.5	15.5	O	1,085	217
Flintstone Creek	3-00150	2	8.5 - 11.0	2.3	O	115	18
Laurel Branch	4-0120	2	0.0 - 1.0	0.5	U	25	4
Twigg Hollow	4-0140	2	0.0 - 1.0	0.5	U	25	4
Wildcat Run	4-0180	2	0.0 - 1.5	1.4	U	70	11
Bear Gap Run	4-0200	2	0.0 - 2.5	1.0	U	50	8
Sweet Root Creek	3-00270	2	0.0 - 6.5	6.0	O	300	48
Sweet Root Run	4-0030	2	0.0 - 3.5	1.5	U	75	12
South Branch Potomac River	2-002630	6	0.0 - 73.2	880.0	M	132,000	26,400
South Fork South Branch Potomac River	2-002630	6	73.2 - 80.7	68.0	M	10,200	2,040
South Fork South Branch Potomac River	2-002630	5	80.7 - 115.2	146.3	U	16,093	3,219
South Fork South Branch Potomac River	2-002630	4	115.2 - 127.2	36.3	M	2,723	545
Springfield Run	3-00040	4	0.0 - 3.5	6.4	O	480	96
Mill Creek	3-00180	4	0.0 - 5.0	11.6	O	870	174
Mill Run	3-00210	2	0.0 - 4.5	8.2	O	410	66
Anderson Run	3-00380	2	0.0 - 2.5	1.5	O	75	12
South Branch Potomac River	3-00480	6	0.0 - 10.0	70.0	U	10,500	2,100

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WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.) TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
South Branch Potomac River	3-00480	5	10.0 - 50.5	109.0		0	11,990	2,398
South Branch Potomac River	3-00480	4	50.5 - 71.5	38.0		0	2,850	570
South Branch Potomac River	3-00480	2	71.5 - 84.0	11.4		0	570	91
Mill Creek	4-0090	4	0.0 - 2.5	3.3		0	248	50
North Mill Creek	4-0090	4	2.5 - 7.5	9.1		0	683	137
South Mill Creek	5-0030	4	0.0 - 2.0	6.0		0	450	90
Spring Run	6-0050	2	0.0 - 3.0	5.5		0	275	44
Lunice Creek	4-0100	4	0.0 - 7.0	21.2		0	1,590	318
North Fork Lunice Creek	4-0100	2	7.0 - 21.0	20.9		0	1,045	167
South Fork Lunice Creek	5-0130	2	0.0 - 7.5	21.2		M	1,060	170
Big Star Creek	5-0130	2	7.5 - 10.0	2.3		0	115	18
Little Star Creek	6-0060	2	0.0 - 2.5	2.3		0	115	18
North Fork South Branch Potomac River	4-0140	6	0.0 - 3.0	27.0		0	4,050	810
North Fork South Branch Potomac River	4-0140	5	3.0 - 11.0	14.5		0	1,595	319
North Fork South Branch Potomac River	4-0140	4	11.0 - 41.0	91.0		0	6,825	1,365
Straight Fork	4-0140	2	41.0 - 42.0	1.0		0	50	8
Jordan Run	5-0040	2	0.0 - 2.5	2.3		0	115	18
Laurel Run	6-0090	2	0.0 - 2.5	1.8		0	90	14
Samuel Run	5-0060	2	0.0 - 2.5	1.0		0	50	8
Broad Run	5-0080	2	0.0 - 2.0	0.6		0	30	5
Moyer Run	5-0100	2	0.0 - 2.5	0.8		0	40	6

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High Ridge Run	5-0120	2	0.0 - 2.5	2.3	U	115	18
Seneca Creek	5-0280	3	0.0 - 6.5	19.7	O	1,379	276
Seneca Creek	5-0280	2	6.5 - 11.5	4.5	O	225	36
Brushy Run	6-0030	2	0.0 - 2.5	2.3	O	115	18
Big Run	5-0660	2	0.0 - 3.0	2.7	O	135	22
Big Run	5-0660	3	3.0 - 10.0	21.2	O	1,484	297
Laurel Fork	5-0720	3	0.0 - 1.5	4.5	O	315	63
Hammer Run	4-0420	2	0.0 - 2.0	1.2	O	60	10
Trout Run	4-0450	2	0.0 - 3.5	5.0	O	250	40
Smith Creek	4-0480	2	0.0 - 6.0	7.9	U	395	63
Thorn Creek	4-0490	3	0.0 - 4.0	5.5	O	385	77
Thorn Creek	4-0490	2	4.0 - 7.5	5.0	O	250	40
Whitethorn Creek	4-0490	2	7.5 - 14.0	6.2	O	310	50
Blackthorn Creek	5-0040	2	0.0 - 7.0	6.4	O	320	51
Dumpling Run	3-00640	2	0.0 - 3.0	2.7	O	135	22
Rough Run	3-00770	2	0.0 - 4.5	4.0	M	200	32
Little Fork Run	3-01030	2	0.0 - 7.0	6.4	O	320	51
Mill Run	2-002660	4	0.0 - 2.0	4.8	O	360	72
Patterson Creek	2-002710	6	0.0 - 22.5	122.7	O	18,405	3,681
Patterson Creek	2-002710	5	22.5 - 35.5	39.3	O	4,323	865
Patterson Creek	2-002710	4	35.5 - 36.5	1.8	O	135	27
Cabin Run	3-00200	1	0.0 - 10.5	19.0	U	1,425	285
Mill Creek	3-00340	1	0.0 - 1.0				
Mill Creek	3-00340	2	1.0 - 7.5	5.9	O	295	47
Mikes Run	3-00380	4	0.0 - 7.0	12.7	O	953	191

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WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
North Fork	3-00560	2	0.0 - 9.0	21.8		0	1,090	174
Evitts Creek	2-002740	5	0.0 - 6.5	39.4		M	4,334	867
Evitts Creek	2-002740	3	6.5 - 10.5	8.4		0	588	118
Evitts Creek	2-002740	4	10.5 - 14.0	6.4		0	480	96
Evitts Creek Dam		R	14.0 - 17.5	534.0				
Evitts Creek	2-002740	2	17.5 - 25.0	6.8		0	340	54
Little Evitts Creek	3-00080	4	0.0 - 2.0	4.8		0	360	72
Rocky Gap	3-00100	2	0.0 - 3.0	3.6		0	180	29
Beaver Run	3-00190	2	0.0 - 4.0	3.6		0	180	29
Wills Creek	2-002760	6	0.0 - 13.5	84.4	Yes#	0	11,610	2,322
Wills Creek	2-002760	5	13.5 - 20.0	11.8		0	1,298	260
Wills Creek	2-002760	4	20.0 - 24.0	7.3		0	548	110
Wills Creek	2-002760	2	24.0 - 31.5	13.6		0	680	109
Braddock Run	3-00030	3	0.0 - 4.0	7.3	Yes#	U	256	51
Braddock Run	3-00030	2	4.0 - 17.0	15.7	Yes#	U	660	106
Jennings Run	3-00050	3	0.0 - 5.0	9.0	Yes#	0	315	63
Jennings Run	3-00050	2	5.0 - 9.0	4.8	Yes#		0	0
North Branch	4-0080	2	0.0 - 2.5	3.0		U	150	24
Dutch Hollow	4-0160	2	0.0 - 1.5	1.0	Yes#		0	0
Gladdens Creek	3-00170	2	0.0 - 6.0	5.5		0	275	44
Little Wills Creek	3-00200	5	0.0 - 2.0	1.8		0	198	40
Shaffers Run	3-00240	2	0.0 - 3.0	2.7		0	135	22
Brush Creek	3-00260	3	0.0 - 1.0	1.8		0	126	25

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Brush Creek	3-00260	2	1.0 - 9.0	7.3		0	365	58
Hillegas Run	4-0060	2	0.0 - 2.0	1.8		0	90	14
Laurel Run	3-00320	2	0.0 - 6.0	4.0		0	200	32
Warrior Run	2-002860	2	0.0 - 5.0	6.0	Yes #	U	175	28
New Creek	2-003010	2	0.0 - 9.5	17.3		0	865	138
Georges Creek	2-003060	3	0.0 - 8.0	14.5	Yes #		0	0
Georges Creek	2-003060	2	8.0 - 12.0	4.8	Yes #		0	0
Mill Run	3-00050	2	0.0 - 4.5	5.5	Yes #		0	0
Laurel Run	3-00090	2	0.0 - 2.0	2.4	Yes #	0	60	10
Koontz Run	3-00130	2	0.0 - 2.0	2.4	Yes #		0	0
Vale Run	3-00220	2	0.0 - 1.0	1.2		U	60	10
Savage River	2-003080	3	0.0 - 4.0	12.0	Yes #	0	683	137
Savage Reservoir		R	4.0 - 8.0	350.0			0	0
Savage River	2-003080	3	8.0 - 18.0	34.6		0	2,422	484
Savage River	2-003080	2	18.0 - 23.5	10.0		U	500	80
Aaron Run	3-00020	2	0.0 - 3.0	3.6	Yes #		0	0
Crabtree Creek	3-00050	4	0.0 - 1.0	2.4		U	180	36
Crabtree Creek	3-00050	3	1.0 - 5.0	7.3		0	511	102
South Fork	3-00050	4	5.0 - 7.0	4.8		U	360	72
Middle Fork Run	4-0020	3	0.0 - 3.0	5.5		0	385	77
Middle Fork Run	4-0020	2	3.0 - 5.5	3.0		0	150	24
Toms Spring Run	5-0010	2	0.0 - 2.5	3.0		U	150	24
Maple Lick Run	4-0060	2	0.0 - 2.0	2.4		U	120	19
North Fork	4-0120	4	0.0 - 1.0	2.4		U	180	36
Pine Swamp Run	3-00080	2	0.0 - 4.5	5.5		U	275	44

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WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.) TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Big Run	3-00090	3	0.0 - 2.5	4.5		O	315	63
Big Run	3-00090	2	2.5 - 9.0	4.2		U	210	34
Monroe Run	4-0010	3	0.0 - 1.5	2.7		M	189	38
Monroe Run	4-0010	2	1.5 - 4.5	3.6		U	180	29
Bear Pen Run	3-00110	2	0.0 - 3.0	3.6		U	180	29
Poplar Lick Run	3-00130	3	0.0 - 2.5	4.5		O	315	63
Poplar Lick Run	3-00130	2	2.5 - 6.5	4.8		U	240	38
Elklick Run	3-00150	2	0.0 - 1.0	1.2		U	60	10
Blacklick Run	3-00170	2	0.0 - 1.0	1.2		U	60	10
Bluelick Run	3-00190	3	0.0 - 1.5	2.7		O	189	38
Bluelick Run	3-00190	2	1.5 - 4.0	3.0		U	150	24
Little Savage River	3-00200	2	0.0 - 8.0	14.5		U	725	116
Pine Swamp Run	2-003090	2	0.0 - 5.5	5.0	Yes #	U	50	8
Laurel Run	2-003100	2	0.0 - 6.5	8.0		U	400	64
Folly Run	2-003120	2	0.0 - 4.5	5.4		O	270	43
Elklick Run	2-003140	2	0.0 - 4.0	4.8	Yes #		0	0
Howell Run	2-003150	2	0.0 - 3.0	2.7		U	135	22
Deep Run	2-003170	2	0.0 - 5.0	6.7	Yes#		0	0
Three Fork Run	2-003180	2	0.0 - 4.0	4.8	Yes #		0	0
Right Prong	3-00020	2	0.0 - 2.5	3.0		U	150	24
Left Prong	3-00030	2	0.0 - 2.0	2.4		U	120	19
Wolfden Run	2-003200	3	0.0 - 1.0	1.8	Yes #		0	0
Wolfden Run	2-003200	2	1.0 - 6.5	5.5	Yes #		0	0

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Abram Creek	2-003210	3	0.0 - 7.5	24.0	Yes #		0	0
Abram Creek	2-003210	2	7.5 - 16.0	21.0	Yes #		0	0
Emory Creek	3-00010	2	0.0 - 4.5	4.0	Yes #		0	0
Johnnycake Run	3-00080	2	0.0 - 3.0	2.7		U	135	22
Short Run	2-003220	2	0.0 - 4.5	5.4		O	270	43
Lostland Run	2-003240	3	0.0 - 1.5	2.7	Yes #		0	0
North Prong	2-003240	2	1.5 - 4.0	3.0	Yes #		0	0
South Prong	3-00010	2	0.0 - 2.5	3.0	Yes #		0	0
Crooked Run	2-003260	2	0.0 - 2.0	2.4		U	120	19
Laurel Run	2-003280	3	0.0 - 2.0	3.6	Yes #		0	0
Laurel Run	2-003280	2	2.0 - 5.0	3.6		U	180	29
Trout Run	3-00020	2	0.0 - 3.5	4.2	Yes #	U	30	5
Riley Spring Run	3-00030	2	0.0 - 1.0	1.2		U	60	10
Stoney River	2-003290	4	0.0 - 5.0	27.2		O	2,040	408
Stoney River	2-003290	2	5.0 - 12.0	6.4		O	320	51
Mill Run	3-00090	2	0.0 - 3.0	3.6		O	180	29
Difficult Creek	2-003310	2	0.0 - 3.0	3.3		U	165	26
Steyer Run	2-003320	2	0.0 - 3.5	4.2		U	210	34
Glade Run	2-003340	3	0.0 - 0.5	1.0		O	70	14
Glade Run	2-003340	4	0.5 - 1.5	2.4		O	180	36
Nydegger Run	2-003360	3	0.0 - 1.5	2.7		O	189	38
Buffalo Creek	2-003370	2	0.0 - 1.0	1.0	Yes#		0	0
Little Buffalo Creek	2-003370	2	1.0 - 4.0	1.8	Yes#		0	0
Buffalo Creek	3-00020	2	0.0 - 3.5	3.2	Yes#		0	0

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WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT (RIVER MILES)	SURFACE AREA (ACRES)	POLLUTION PRESENT	CURRENT SPORT FISHING USE	AV. ANN. PRODUCTIVITY WITH EXISTING POLLUTION (LBS.)	
							TOTAL STANDING CROP	TOTAL SUSTAINED HARVEST
Shields Run	2-003380	3	0.0 - 1.0	1.8		O	126	25
Shields Run	2-003380	2	1.0 - 3.0	2.4		U	120	19
McMillon Fork	3-00010	2	0.0 - 2.0	2.4		U	120	19
Sand Run	2-003400	4	0.0 - 1.0	2.4		O	180	36
North Fork	2-003400	2	1.0 - 1.5	0.6		U	30	5
South Fork	3-00010	2	0.0 - 1.0	1.2		U	60	10
Red Oak Creek	2-003410	2	0.0 - 3.0	1.8		U	90	14
Laurel Run	2-003420	4	0.0 - 2.0	4.8	Yes #		0	0
Laurel Run	2-003420	3	2.0 - 4.5	4.5	Yes #		0	0
Laurel Run	2-003420	2	4.5 - 6.5	2.4	Yes #		0	0
Elk Run	2-003450	2	0.0 - 2.5	2.3	Yes #		0	0

TABLE 10

SUMMARY OF COMMERCIAL FISHERY HARVEST

AVERAGE ANNUAL 1960 - 1964

CHESAPEAKE BAY AND TRIBUTARIES (EXCEPT SUSQUEHANNA RIVER BASIN)

(IN THOUSANDS)

		FINFISH				SHELLFISH									
		EDIBLE		INDUSTRIAL		OYSTERS[1]		CLAMS		CRABS		MISC.		TOTAL	
WATER AREA	ACRES	LBS.	$	LBS.	$	LBS.[2]	$	LBS.[2]	$	LBS.	$	LBS.	$	LBS.	$
Chesapeake Bay	2,041	24,478	2,003	224,381	2,688	8,439	6,198	5,514	1,491	56,874	4,007	210	18	319,896	16,405
Chester River	35	58	6	-	-	200	140	314	73	Negl.	Negl.	13	1	585	220
Choptank River	69	123	15	-	-	1,595	1,141	-	-	21	7	20	3	1,759	1,166
Nanticoke River	18	49	6	-	-	508	363	-	-	151	11	8	1	716	381
Patuxent River	30	45	5	-	-	625	413	175	37	44	3	Negl.	Negl.	889	458
Wicomico River	10	20	3	-	-	153	112	-	-	-	-	1	Negl.	174	115
Potomac River	310	11,249	451	8,588	131	2,370	1,830	991	177	5,120	343	8	1	28,326	2,933
Rappahannock River	98	5,133	238	3,464	55	3,842	3,010	Negl.	Negl.	4,104	280	23	3	16,566	3,586
York River	55	2,156	153	1,129	18	1,140	846	239	113	2,018	108	29	4	6,711	1,242
James River	166	5,264	338	1,885	30	1,759	2,726	50	24	1,835	98	103	16	10,896	3,232
Seaside	214	718	55	-	-	2,353	2,005	1,447	700	5,217	349	71	7	9,806	3,116
Total Study Area	3,046	49,293	3,273	239,447	2,922	22,984	18,784	8,730	2,615	75,384	5,206	486	54	396,324	32,854

1. Seed oysters included in value but not weight.
2. Reported as pounds of meat.

TABLE 11

COMMERCIAL FINFISH HARVEST

AVERAGE ANNUAL 1960 - 1964

CHESAPEAKE BAY AND TRIBUTARIES (EXCEPT SUSQUEHANNA RIVER BASIN)

(IN THOUSANDS)

WATER AREA	ACRES	MAJOR SPECIES																TOTAL HARVEST	
		MENHADEN		ALEWIVES		STRIPED BASS		SHAD		CATFISH		SPOT		CROAKER		OTHERS			
		LBS.	$	LBS.	$	LBS.	$	LBS.	$	LBS.	$	LBS.	$	LBS.	$	LBS.	$	LBS.	$
Chesapeake Bay	2,041	224,381	2,688	8,822	154	4,281	613	2,019	299	243	16	1,529	187	1,371	253	6,213	481	248,859	4,691
Chester River	35	-	-	2	Negl.	15	2	9	1	4	Negl.	-	-	-	-	28	3	58	6
Choptank River	69	-	-	5	1	54	9	12	2	6	Negl.	-	-	-	-	46	3	123	15
Nanticoke River	18	-	-	-	-	22	3	9	1	-	-	-	-	-	-	18	2	49	6
Patuxent River	30	-	-	1	Negl.	24	4	4	Negl.	1	Negl.	-	-	-	-	15	1	45	5
Wicomico River	10	-	-	-	-	7	1	9	1	-	-	-	-	-	-	4	1	20	3
Potomac River	310	8,588	131	8,254	147	917	136	221	26	894	58	272	30	39	7	652	47	19,837	582
Rappahannock River	98	3,464	55	3,602	66	210	30	258	39	235	16	194	21	199	40	435	26	8,597	293
York River	55	1,129	18	930	15	195	27	326	48	266	18	142	17	45	9	252	19	3,285	171
James River	166	1,885	30	2,405	42	571	82	385	60	929	64	295	35	96	19	583	36	7,149	368
Seaside	214	-	-	-	-	-	-	-	-	-	-	-	-	-	-	718	55	718	55
Total Study Area	3,046	239,447	2,922	24,021	425	6,296	907	3,252	477	2,578	172	2,432	290	1,750	328	8,964	674	288,740	6,195

TABLE 12

COMMERCIAL SHELLFISH HARVEST

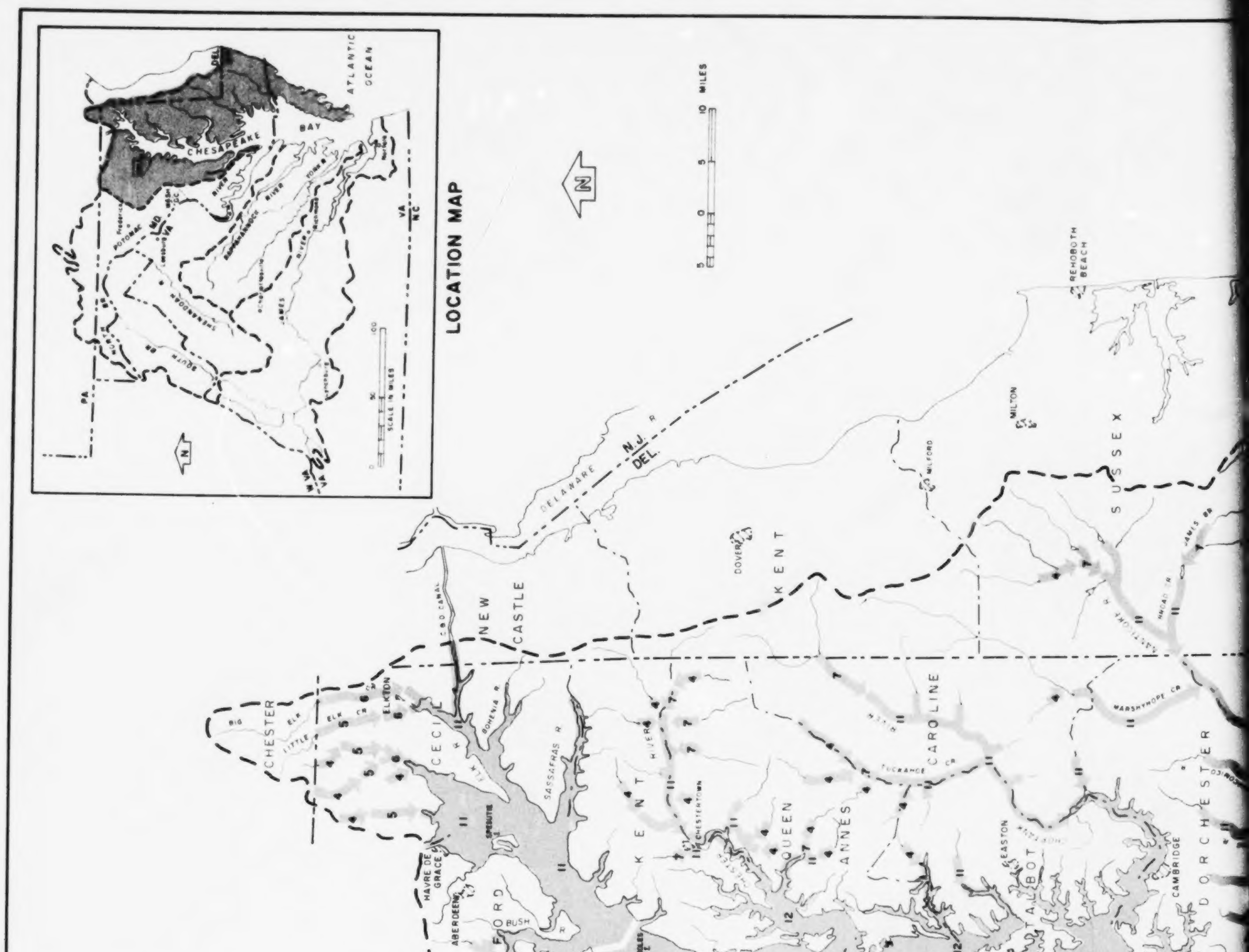
AVERAGE ANNUAL 1960 - 1964

CHESAPEAKE BAY AND TRIBUTARIES (EXCEPT SUSQUEHANNA RIVER BASIN)

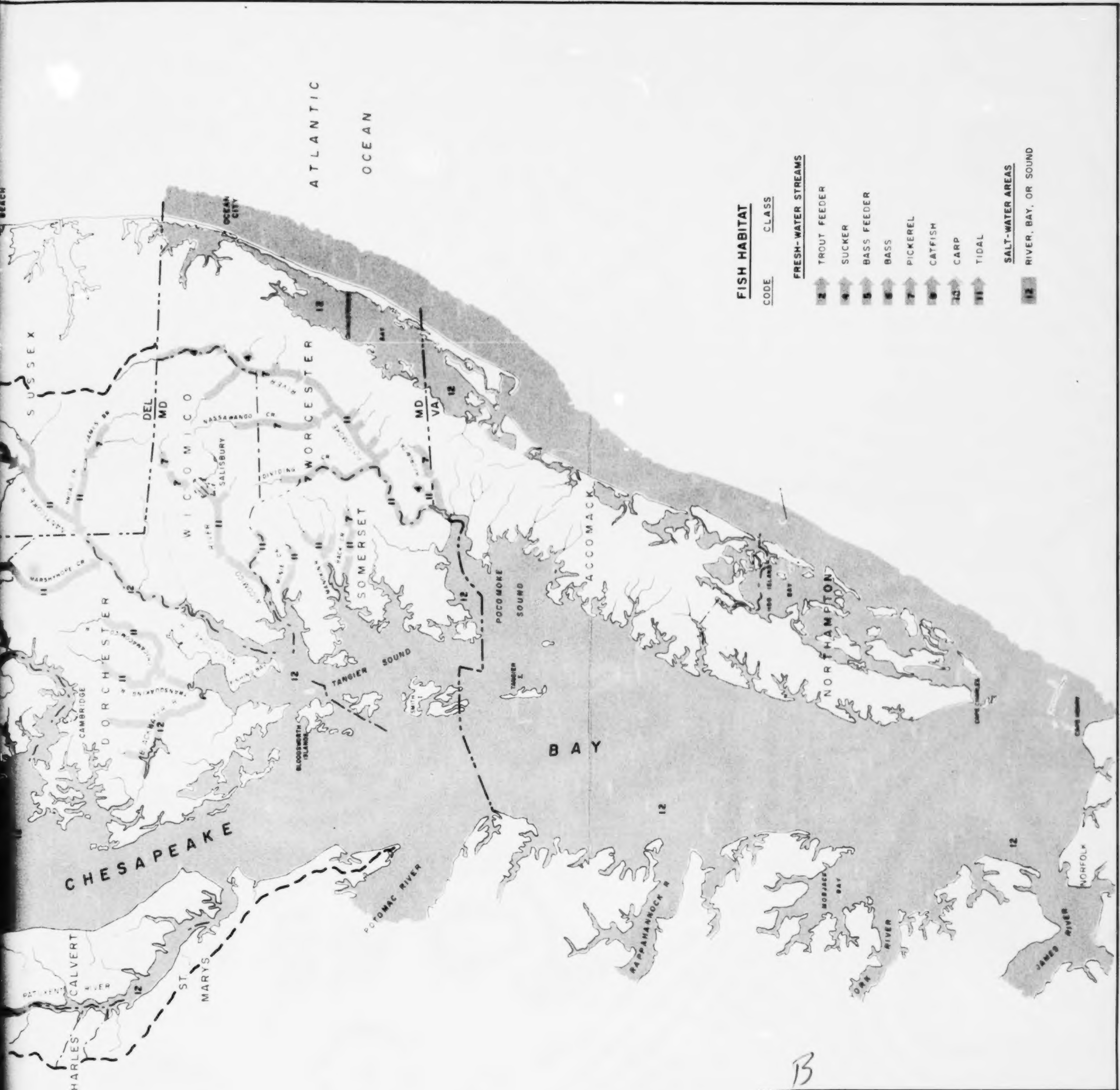
(IN THOUSANDS)

	OYSTERS									CLAMS			CRABS		TOTAL HARVEST[1]	
	PUBLIC						PRIVATE			Soft and Hard						
	SEED			MARKET			MARKET									
WATER AREA	AC.	BU.	$	AC.	LBS.[3]	$	AC.	LBS.[3]	$	AC.	LBS.[3]	$	LBS.	$	LBS.[2]	$
Chesapeake Bay	0.990	-	-	334.7	5,288	3,808	66.5	3,151	2,390	426.3	5,514	1,491	56,874	4,007	70,827	11,696
Chester River	-	-	-	7.7	200	140	-	-	-	17.8	314	73	Negl.	Negl.	514	213
Choptank River	0.160	-	-	46.5	1,595	1,141	0.5	-	-	36.7	-	-	21	7	1,616	1,148
Nanticoke River	-	-	-	3.0	265	189	2.2	243	174	-	-	-	151	11	659	374
Patuxent River	-	-	-	13.4	340	236	1.6	285	177	13.7	175	37	44	3	844	453
Wicomico River	-	-	-	5.1	70	51	0.8	83	61	-	-	-	-	-	153	112
Potomac River	0.060	-	-	17.6	1,216	920	8.3	1,154	910	71.1	991	177	5,120	343	8,481	2,350
Rappahannock River	-	-	-	55.2	937	724	13.1	2,905	2,286	Negl.	Negl.	Negl.	4,104	280	7,946	3,290
York River	-	-	-	2.4	65	50	15.0	1,075	796	16.4	239	113	2,018	108	3,397	1,067
James River	11.680	1,722	1,391	34.5	522	376	16.3	1,237	959	8.2	50	24	1,835	98	3,644	2,848
Seaside	0.200	94	86	46.4	124	93	19.5	2,229	1,826	65.8	1,447	700	5,217	349	9,017	3,054
Total Study Area	13.090	1,816	1,477	566.5	10,622	7,728	143.8	12,362	9,579	656.0	8,730	2,615	75,384	5,206	107,098	26,605

1. Miscellaneous shellfish (table 10) not included.
2. Seed oysters not included.
3. Reported as pounds of meat.



LOCATION MAP
ATLANTIC OCEAN
CHESAPEAKE BAY
POTOMAC
RAPPAHANNOCK RIVER
YORK RIVER
JAMES
SHENANDOAH
SCALE IN MILES
0
50
100
PA
MD
VA
NC
W. VA
DEL
N
0
5
10 MILES
PA
MD.
N.J.
DEL.
YORK
CHESTER
CECIL
NEW CASTLE
KENT
SUSSEX
HARFORD
BALTIMORE
CARROLL
HOWARD
MONTGOMERY
ANNE ARUNDEL
PRINCE GEORGES
CHARLES
CALVERT
QUEEN ANNES
CAROLINE
TALBOT
DORCHESTER
CHES
DELAWARE R
C & D CANAL
ELKTON
HAVRE DE GRACE
ABERDEEN
BEL AIR
CHESTERTOWN
EASTON
CAMBRIDGE
ANNAPOLIS
DOVER
MILFORD
MILTON
REHOBOTH BEACH
BIG ELK
LITTLE ELK
ELK CR
BOHEMIA R
SASSAFRAS R
ELK R
BUSH R
GUNPOWDER R
GUNPOWDER FALLS
LITTLE GUNPOWDER FALLS
WINTERS RUN
LITTLE FALLS
GUNPOWDER
PRETTYBOY RESERVOIR
LOCH RAVEN RESERVOIR
MIDDLE RIVER
BACK R
EDGEMERE
WESTERN RUN
PATAPSCO
PATAPSCO RESERVOIR
SOUTH BR
PINEY RUN
LITTLE PATUXENT R
MIDDLE PATUXENT R
TRIADELPHIA RESERVOIR
ROCKY GORGE RES
PATUXENT
PATUXENT RIVER
WESTERN BR
FORT GEORGE MEADE
ORCHARD BEACH
RIVIERA BEACH
GLEN BURNIE
SEVERN RIVER
SOUTH R
KENT
EASTERN BAY
CHESTER R
CHOPTANK R
TUCKAHOE CR
MARSHYHOPE CR
NANTICOKE R
BROAD CR
JAMES BR
KENT R
SPESUTIE I
POOLES I
4
5
6
7
11
12


ATLANTIC OCEAN
FISH HABITAT
CODE
CLASS
FRESH-WATER STREAMS
2 TROUT FEEDER
4 SUCKER
5 BASS FEEDER
6 BASS
7 PICKEREL
8 CATFISH
10 CARP
11 TIDAL
SALT-WATER AREAS
12 RIVER, BAY, OR SOUND
BEACH
OCEAN CITY
SUSSEX
DEL
MD
WICOMICO
SALISBURY
NASSAWANGO CR
DIVIDING CR
WORCESTER
MD
VA
SOMERSET
ACCOMACK
POCOMOKE SOUND
TANGIER SOUND
TANGIER I.
SMITH I.
BLOODSWORTH ISLAND
MARSHYHOPE CR
DORCHESTER
CAMBRIDGE
HOG ISLAND BAY
NORTHAMPTON
CAPE CHARLES
CAPE HENRY
CHESAPEAKE
BAY
POTOMAC RIVER
RAPPAHANNOCK R
MOBJACK BAY
YORK RIVER
JAMES RIVER
NORFOLK
CALVERT
PATUXENT RIVER
ST. MARYS
CHARLES
12
11
7
4

B

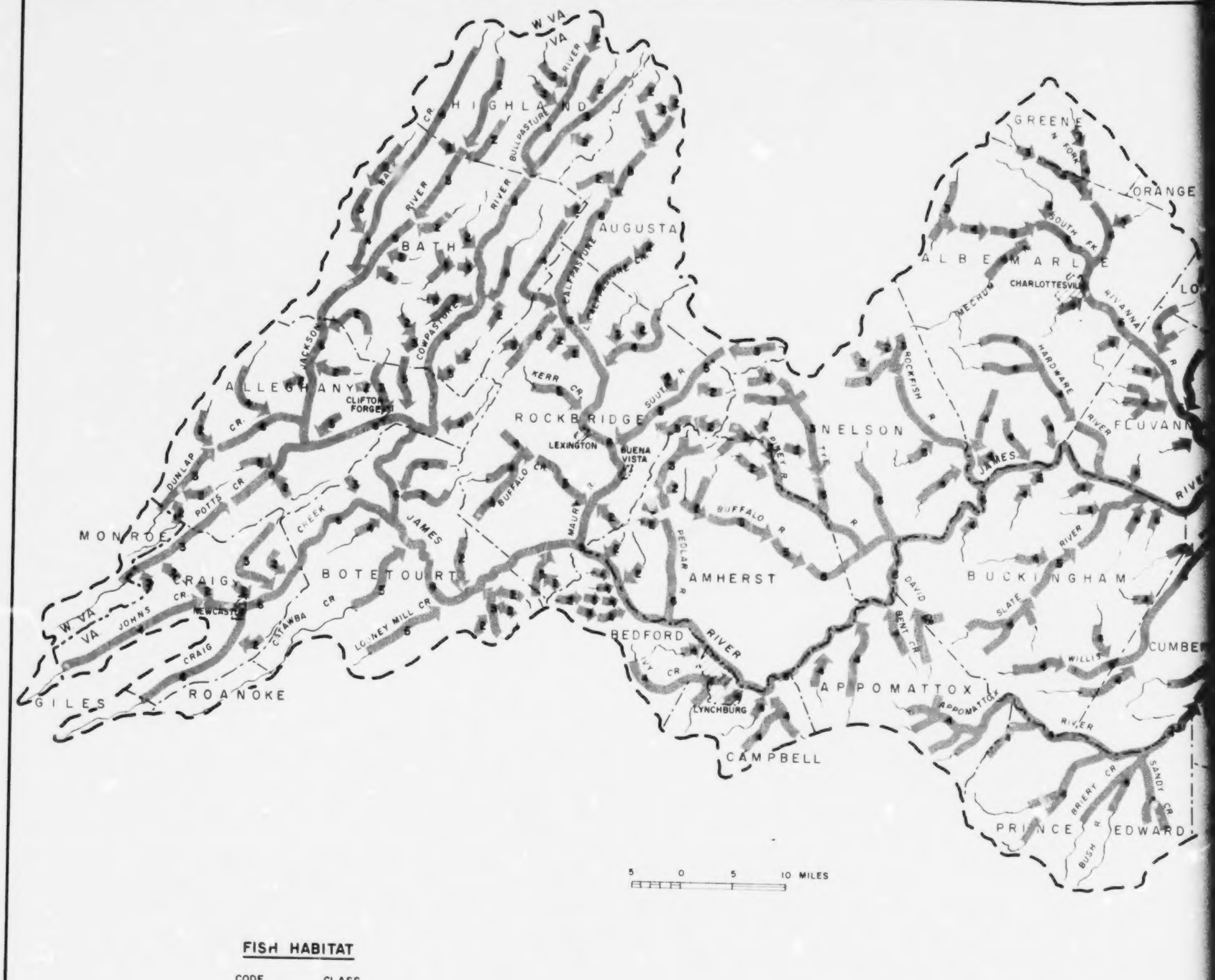
CHESAPEAKE. BAY AREA

FISH HABITAT CLASSIFICATION

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

126

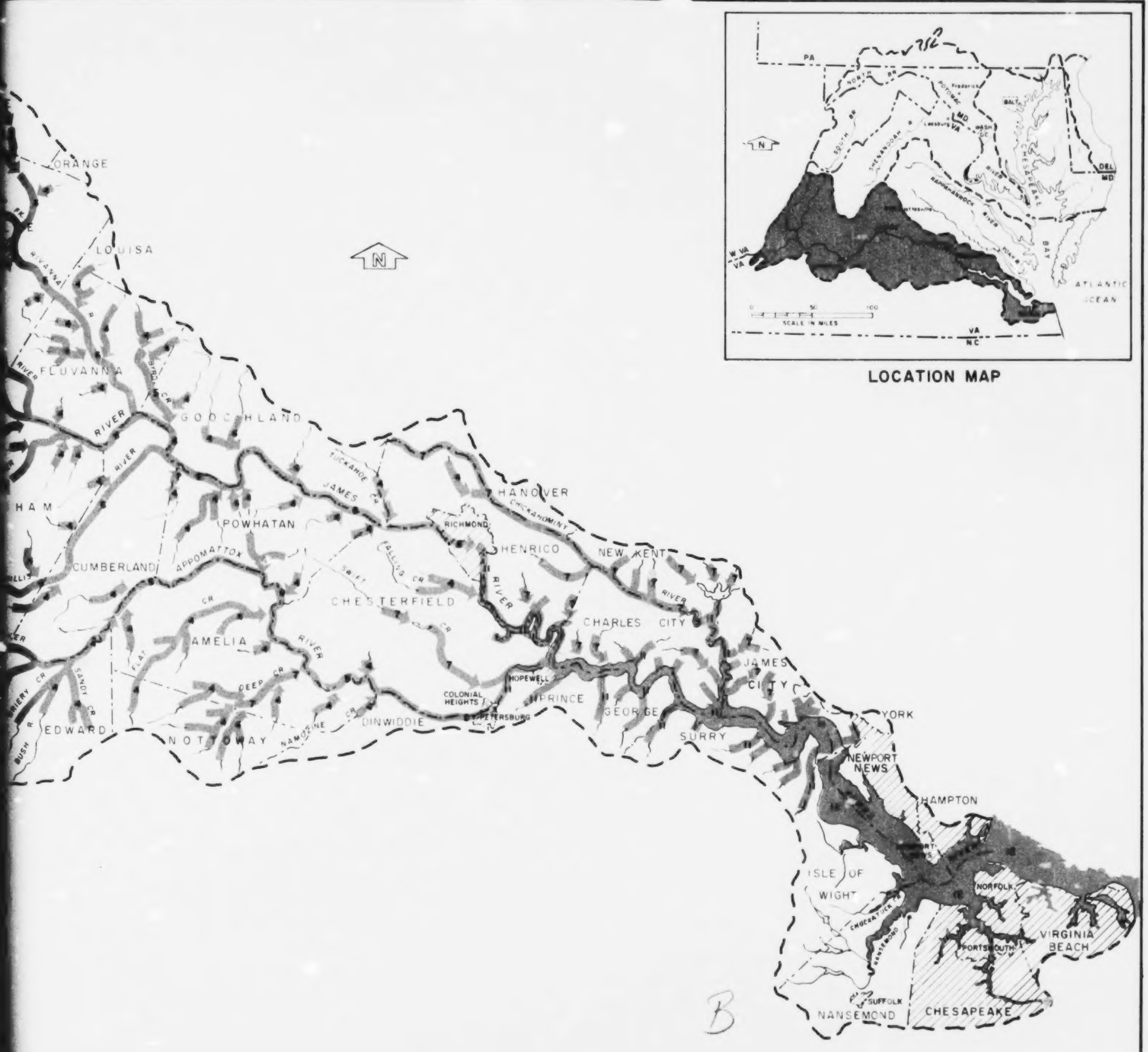
PLATE I


W VA
VA
HIGHLAND
BATH
AUGUSTA
ALLEGHANY
CLIFTON FORGE
ROCKBRIDGE
LEXINGTON
BUENA VISTA
MONROE
CRAIG
NEWCASTLE
BOTETOURT
GILES
ROANOKE
BEDFORD
LYNCHBURG
CAMPBELL
AMHERST
NELSON
APPOMATTOX
BUCKINGHAM
PRINCE EDWARD
CUMBER
FLUVANN
ALBEMARLE
CHARLOTTESVILLE
GREENE
ORANGE
LO
BULLPASTURE RIVER
COWPASTURE RIVER
CALFPASTURE
JACKSON RIVER
DUNLAP CR
POTTS CR
JOHNS CR
CRAIG CR
CATAWBA CR
LOONEY MILL CR
BUFFALO CR
KERR CR
MAURY R
SOUTH R
PEDLAR R
BUFFALO R
PINEY R
TYE R
ROCKFISH R
JAMES RIVER
RIVANNA
MECHUM
SOUTH FK
HARDWARE RIVER
SLATE RIVER
WILLIS
DAVID CR
BENT CR
APPOMATTOX RIVER
BRIERY CR
BUSH R
SANDY CR
5 0 5 10 MILES

FISH HABITAT

CODE	CLASS
➡	**FRESH-WATER STREAMS**
➡	TROUT FEEDER
➡	TROUT
➡	SUCKER
➡	BASS FEEDER
➡	BASS
➡	PICKEREL
➡	CATFISH
➡	TIDAL
	SALT-WATER AREAS
▨	RIVER, BAY, OR SOUND

A


ORANGE
LOUISA
RIVANNA R
FLUVANNA
RIVER
GOOCHLAND
TUCKAHOE CR
JAMES
HANOVER
CHICKAHOMINY
RICHMOND
HENRICO
NEW KENT
RIVER
HAM
POWHATAN
CUMBERLAND
APPOMATTOX
SWIFT
FALLING CR
CR
CHESTERFIELD
RIVER
CHARLES CITY
AMELIA
FLAT
CR
DEEP CR
RIVER
BRIERY CR
SANDY CR
EDWARD
BUSH R
NOTTOWAY
NAMOZINE CR
DINWIDDIE
COLONIAL HEIGHTS
PETERSBURG
HOPEWELL
PRINCE GEORGE
JAMES CITY
YORK
SURRY
NEWPORT NEWS
HAMPTON
ISLE OF WIGHT
NORFOLK
CHUCKATUCK CR
NANSEMOND
PORTSMOUTH
VIRGINIA BEACH
SUFFOLK
NANSEMOND
CHESAPEAKE
N
PA
MD
VA
W VA
DEL
NC
NORTH BR
SOUTH BR
POTOMAC
Frederick
BALT
WASH DC
Leesburg
SHENANDOAH
RAPPAHANNOCK RIVER
YORK RIVER
CHESAPEAKE BAY
ATLANTIC OCEAN
0 50 100
SCALE IN MILES
LOCATION MAP

B

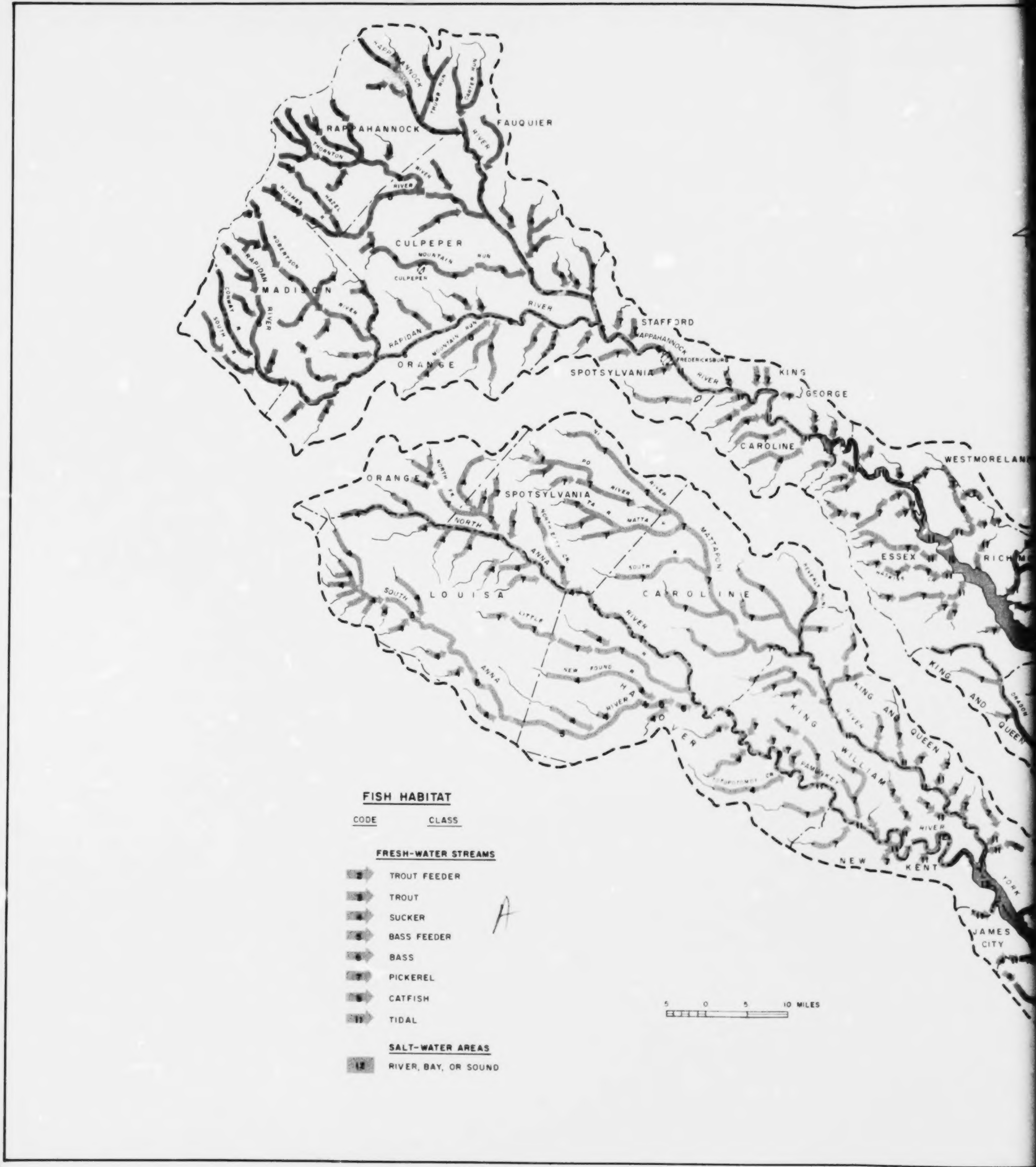
JAMES RIVER BASIN

FISH HABITAT CLASSIFICATION

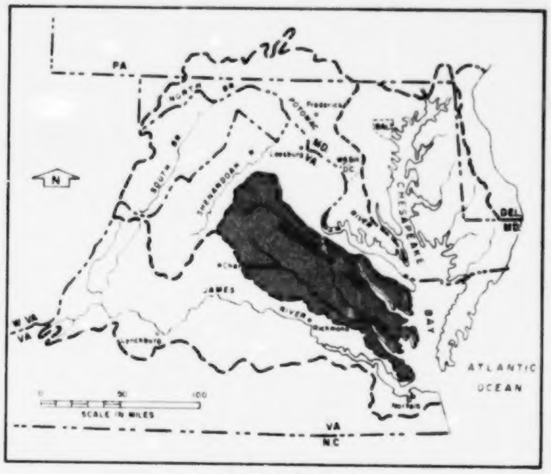
UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

127

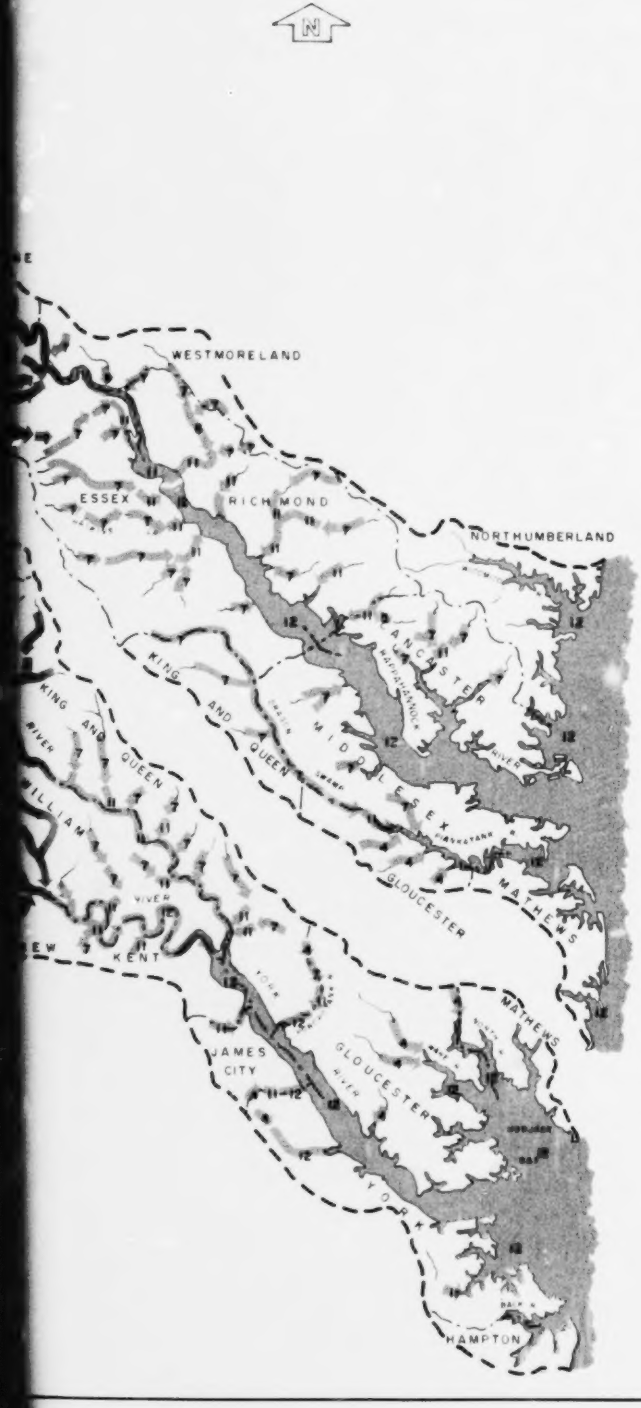
PLATE 2


RAPPAHANNOCK
THUMB RUN
CARTER RUN
FAUQUIER
RAPPAHANNOCK
THORNTON
RIVER
RIVER
RIVER
HUGHES
HAZEL
ROBERTSON
CULPEPER
MOUNTAIN RUN
CULPEPER
RAPIDAN
CONWAY
MADISON
RIVER
SOUTH R
RIVER
RIVER
RAPIDAN
MOUNTAIN RUN
ORANGE
STAFFORD
RAPPAHANNOCK
FREDERICKSBURG
SPOTSYLVANIA
RIVER
KING
GEORGE
CAROLINE
WESTMORELAND
ORANGE
NORTH
SPOTSYLVANIA
PO
RIVER
RIVER
TA
MATTA
NORTH
ANNA
NORTH EAST CR
MATTAPONI
SOUTH
ESSEX
RICHM
LOUISA
SOUTH
LITTLE
CAROLINE
RIVER
KING AND QUEEN
KING AND QUEEN
ANNA
NEW FOUND
HANOVER
RIVER
KING WILLIAM
RIVER
PAMUNKEY
NEW KENT
RIVER
YORK
JAMES CITY
5 0 5 10 MILES
FISH HABITAT
CODE CLASS
FRESH-WATER STREAMS
2 TROUT FEEDER
3 TROUT
4 SUCKER
5 BASS FEEDER
6 BASS
7 PICKEREL
8 CATFISH
11 TIDAL
SALT-WATER AREAS
12 RIVER, BAY, OR SOUND

A


PA
MD
VA
DC
DEL
MD
W VA
VA
SOUTH
SHENANDOAH
POTOMAC
JAMES
RIVER
CHESAPEAKE
BAY
ATLANTIC
OCEAN
0
50
100
SCALE IN MILES
VA
NC
N

LOCATION MAP


N
WESTMORELAND
ESSEX
RICHMOND
NORTHUMBERLAND
LANCASTER
RAPPAHANNOCK
RIVER
KING
AND
QUEEN
KING
AND
QUEEN
MIDDLESEX
DRAGON
SWAMP
PIANKATANK R.
GLOUCESTER
MATHEWS
WILLIAM
RIVER
NEW KENT
YORK
RIVER
JAMES
CITY
GLOUCESTER
MATHEWS
MOBJACK
BAY
YORK
HAMPTON
7
11
12

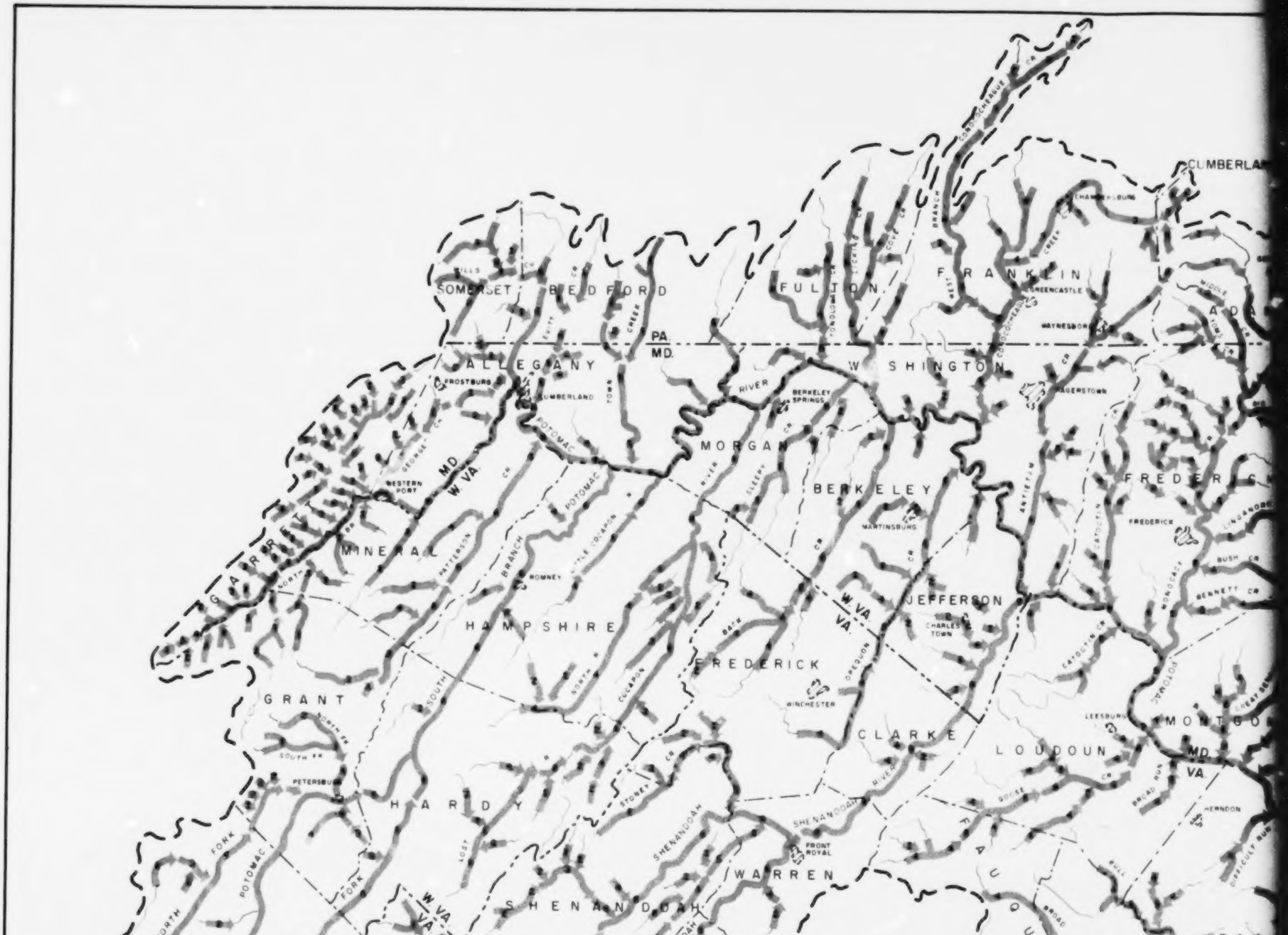
B

RAPPAHANNOCK AND YORK RIVER BASINS
VIRGINIA

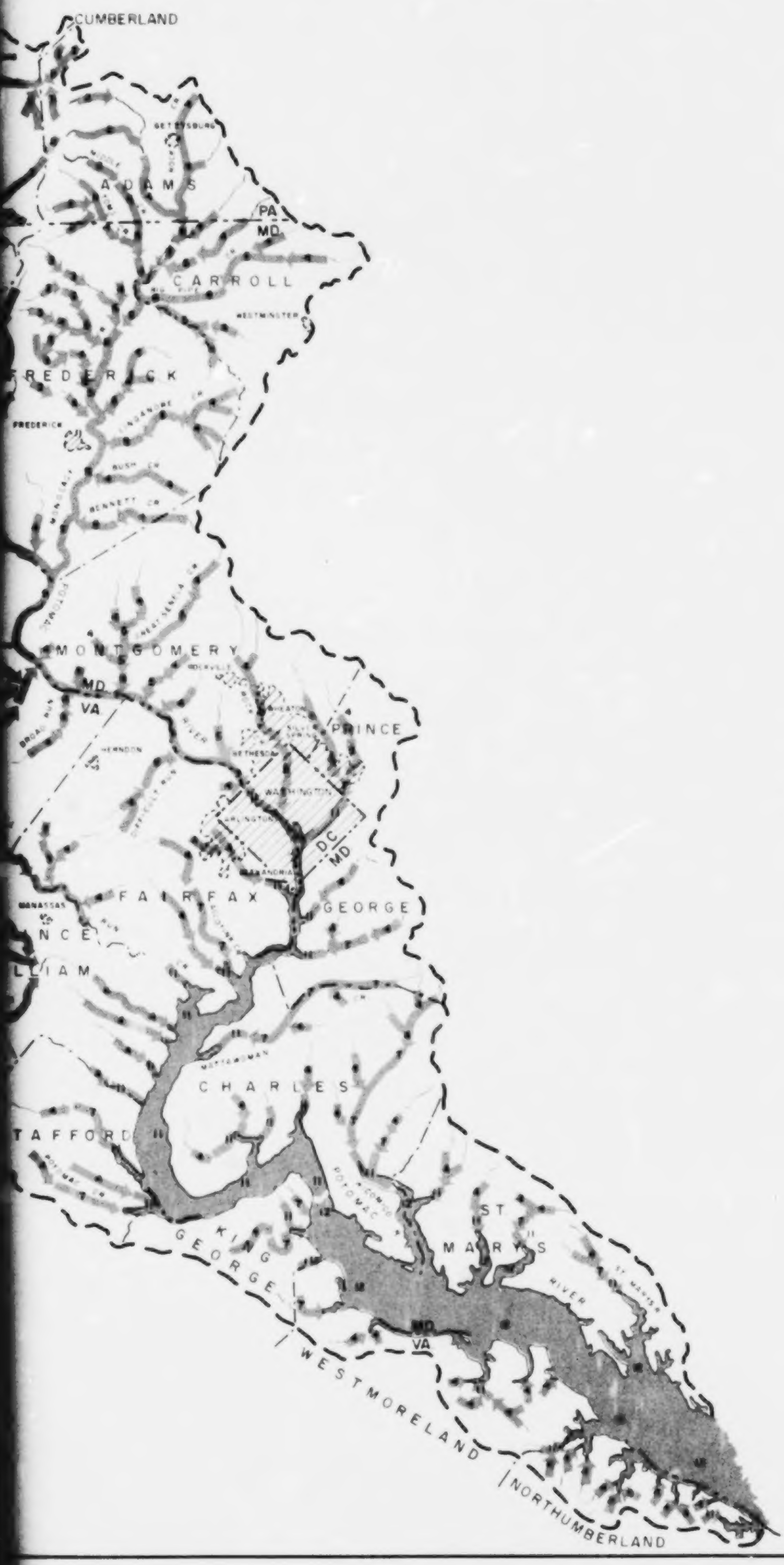
FISH HABITAT CLASSIFICATION

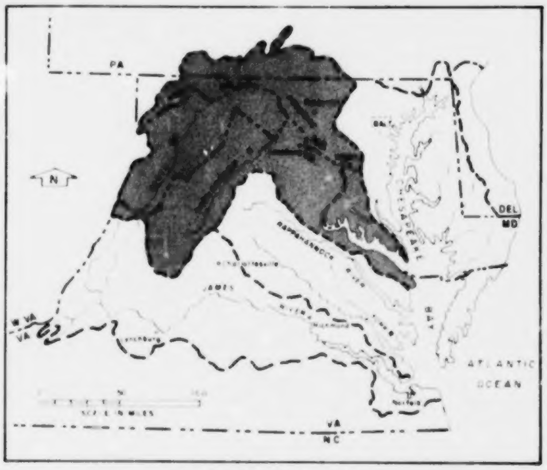
UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

PLATE 3


SOMERSET
BEDFORD
FULTON
FRANKLIN
CUMBERLAND
ADA
PA.
MD.
ALLEGANY
FROSTBURG
CUMBERLAND
WASHINGTON
HAGERSTOWN
CHAMBERSBURG
GREENCASTLE
WAYNESBORO
BERKELEY SPRINGS
MORGAN
BERKELEY
MARTINSBURG
FREDERICK
FREDERICK
GARRETT
WESTERN PORT
MD.
W. VA.
MINERAL
HAMPSHIRE
ROMNEY
JEFFERSON
CHARLES TOWN
W. VA.
VA.
FREDERICK
WINCHESTER
CLARKE
LOUDOUN
LEESBURG
MONTGO
MD.
VA.
HERNDON
GRANT
PETERSBURG
HARDY
SHENANDOAH
FRONT ROYAL
WARREN
FAUQUIER
WARRENTON
MANASSAS
PRINCE WILLIAM
FA
PENDLETON
W. VA.
VA.
LURAY
PAGE
ROCKINGHAM
HARRISONBURG
HIGHLAND
STAFFORD
AUGUSTA
STAUNTON
WAYNESBORO
POTOMAC
RIVER
SHENANDOAH
NORTH FORK
SOUTH FORK
SOUTH BRANCH
NORTH BRANCH
CONOCOCHEAGUE CR.
ANTIETAM CR.
CATOCTIN CR.
MONOCACY
OPEQUON
CACAPON
GOOSE CR.
BULL RUN
BROAD RUN
CEDAR RUN
N
5 0 5 10 MILES

A


CUMBERLAND
GETTYSBURG
ADAMS
PA
MD
CARROLL
WESTMINSTER
FREDERICK
FREDERICK
LINGANORE CR
BUSH CR
BENNETT CR
MONOCACY
MONTGOMERY
ROCKVILLE
MD
VA
BROAD RUN
HERNDON
RIVER
BETHESDA
WASHINGTON
ARLINGTON
PRINCE
DC
MD
ALEXANDRIA
FAIRFAX
MANASSAS
GEORGE
NCE
LLIAM
MATTAWOMAN
CHARLES
TAFFORD
KING GEORGE
POTOMAC
WICOMICO
ST MARYS
ST MARYS RIVER
MD
VA
WESTMORELAND
NORTHUMBERLAND


PA
N
DEL
MD
BALT
CHESAPEAKE
BAY
RAPPAHANNOCK RIVER
JAMES RIVER
RICHMOND
LYNCHBURG
NORFOLK
W VA
VA
ATLANTIC OCEAN
SCALE IN MILES
VA
NC

LOCATION MAP

FISH HABITAT

CODE	CLASS
	FRESH-WATER STREAMS
2	TROUT FEEDER
3	TROUT
4	SUCKER
5	BASS FEEDER
6	BASS
7	PICKEREL
8	BULLHEAD
9	CATFISH
11	TIDAL
	SALT-WATER AREAS
12	RIVER, BAY, OR SOUND

B

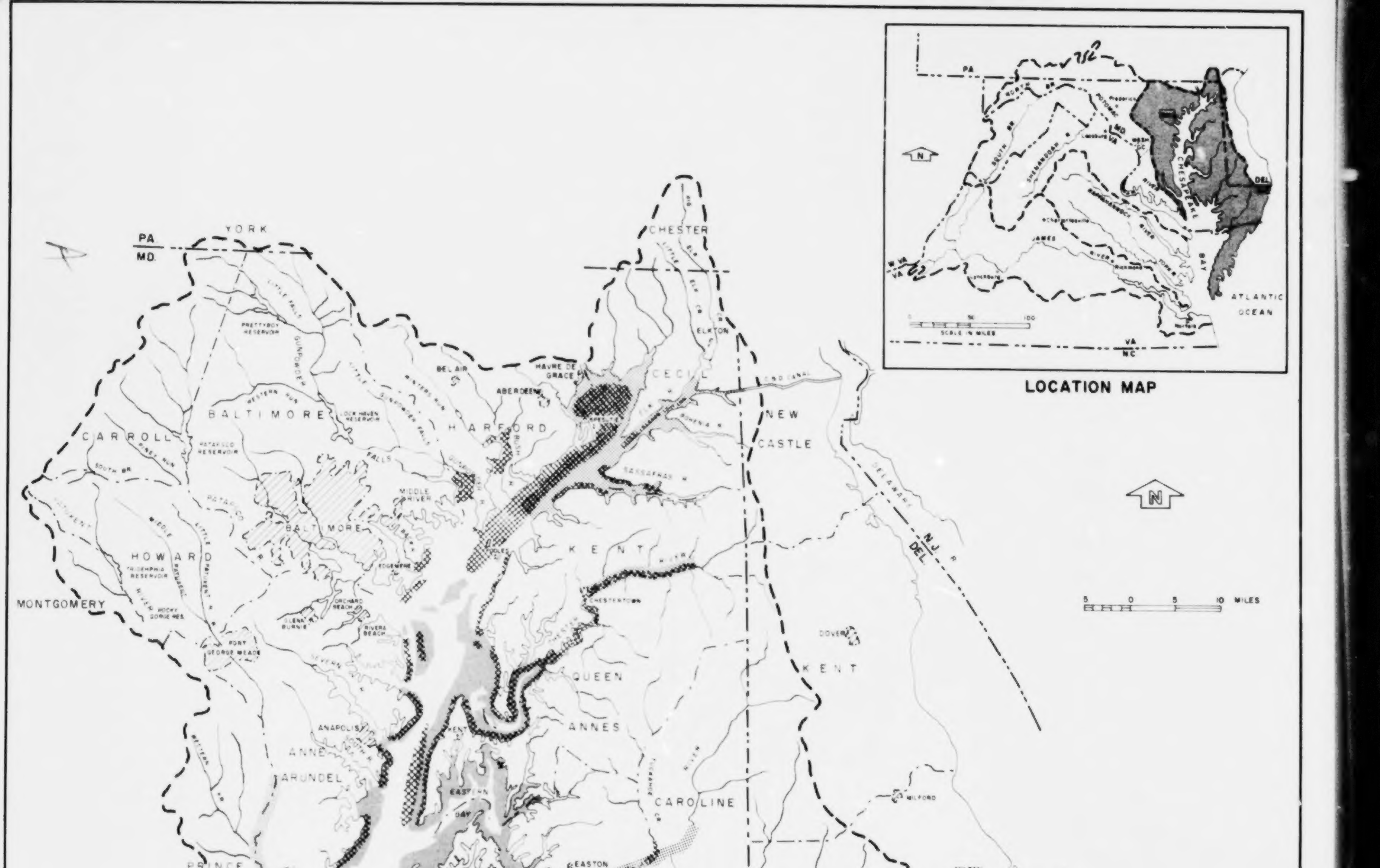
129

POTOMAC RIVER BASIN

FISH HABITAT CLASSIFICATION

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

PLATE 4


LOCATION MAP
PA
N
DEL
CHESAPEAKE
BAY
ATLANTIC OCEAN
POTOMAC
SHENANDOAH
JAMES
RIVER
YORK R.
SCALE IN MILES
VA
NC
W.VA
MD
PA
MD.
YORK
CHESTER
ELKTON
HAVRE DE GRACE
ABERDEEN
BEL AIR
CECIL
NEW CASTLE
BALTIMORE
CARROLL
HARFORD
PRETTYBOY RESERVOIR
LITTLE FALLS
GUNPOWDER
LOCH RAVEN RESERVOIR
WESTERN RUN
PATAPSCO
MIDDLE RIVER
BALTIMORE
HOWARD
TRIADELPHIA RESERVOIR
ROCKY GORGE RES.
MONTGOMERY
FORT GEORGE MEADE
ORCHARD BEACH
GLEN BURNIE
RIVERA BEACH
KENT
SASSAFRAS R.
CHESTERTOWN
N
5 0 5 10 MILES
DELAWARE
N.J.
DEL
DOVER
KENT
QUEEN ANNES
ANNAPOLIS
ANNE ARUNDEL
EASTERN BAY
CAROLINE
TUCKAHOE CR.
MILFORD
MILTON
REHOBOTH BEACH
SUSSEX
PRINCE GEORGES
TALBOT
EASTON
CAMBRIDGE
DORCHESTER
CHARLES
CALVERT
PATUXENT RIVER
CHESAPEAK
ST. MARYS
MARSHYHOPE CR.
NANTICOKE R.
DEL
MD
WICOMICO

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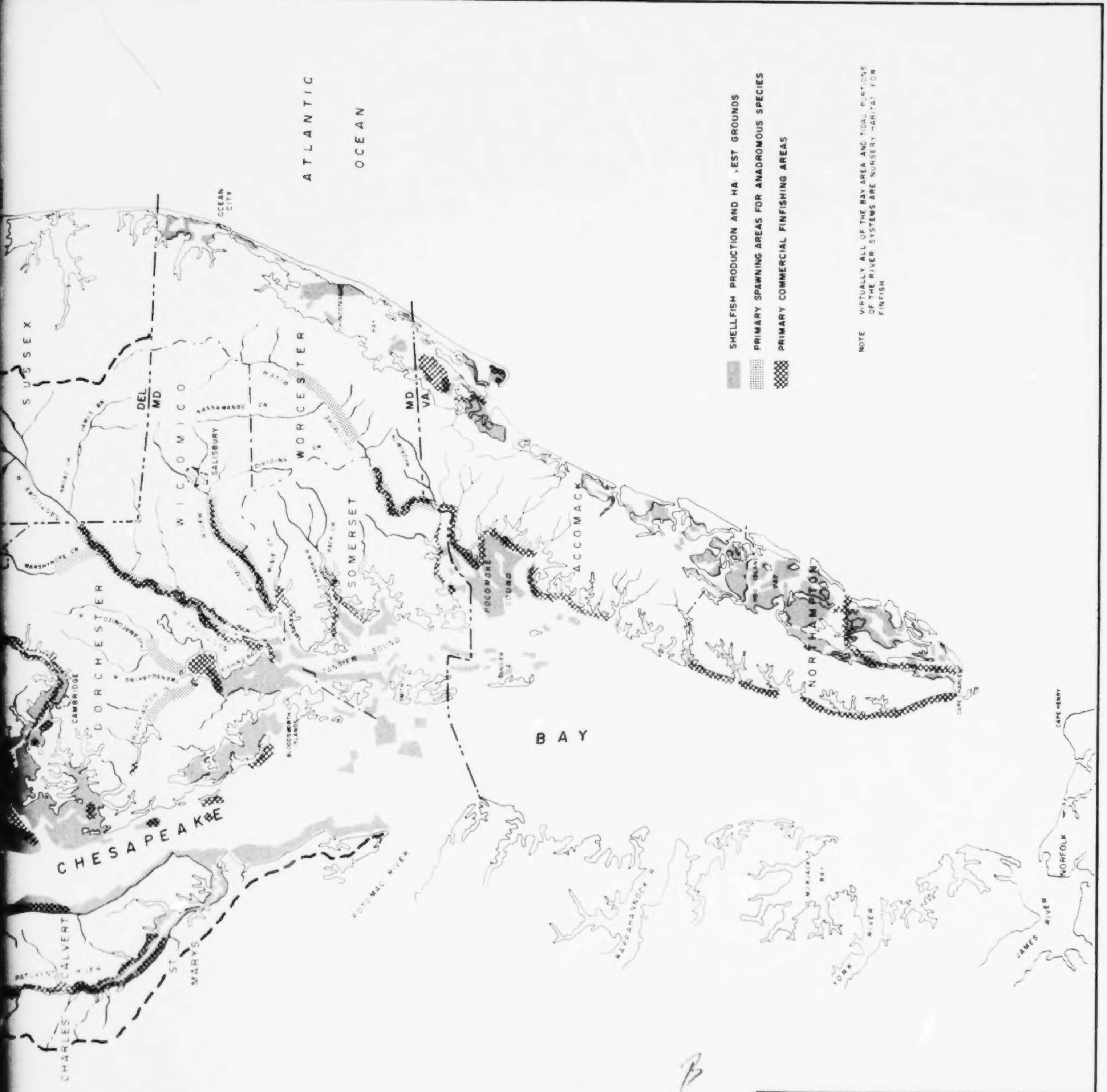

SHELLFISH PRODUCTION AND HARVEST GROUNDS
PRIMARY SPAWNING AREAS FOR ANADROMOUS SPECIES
PRIMARY COMMERCIAL FINFISHING AREAS
NOTE VIRTUALLY ALL OF THE BAY AREA AND TIDAL PORTIONS OF THE RIVER SYSTEMS ARE NURSERY HABITAT FOR FINFISH
ATLANTIC
OCEAN
OCEAN CITY
SUSSEX
DEL
MD
MD
VA
WICOMICO
SALISBURY
WORCESTER
NASSAWANGO CR
DIVIDING CR
SOMERSET
ACCOMACK
NORTHAMPTON
POCOMOKE SOUND
TANGIER SOUND
DORCHESTER
CAMBRIDGE
MARSHYHOPE CR
BLOODSWORTH ISLANDS
BAY
CHESAPEAKE
CALVERT
PATUXENT RIVER
ST MARYS
CHARLES
POTOMAC RIVER
RAPPAHANNOCK R
MOBJACK BAY
YORK RIVER
JAMES RIVER
NORFOLK
CAPE HENRY
CAPE CHARLES

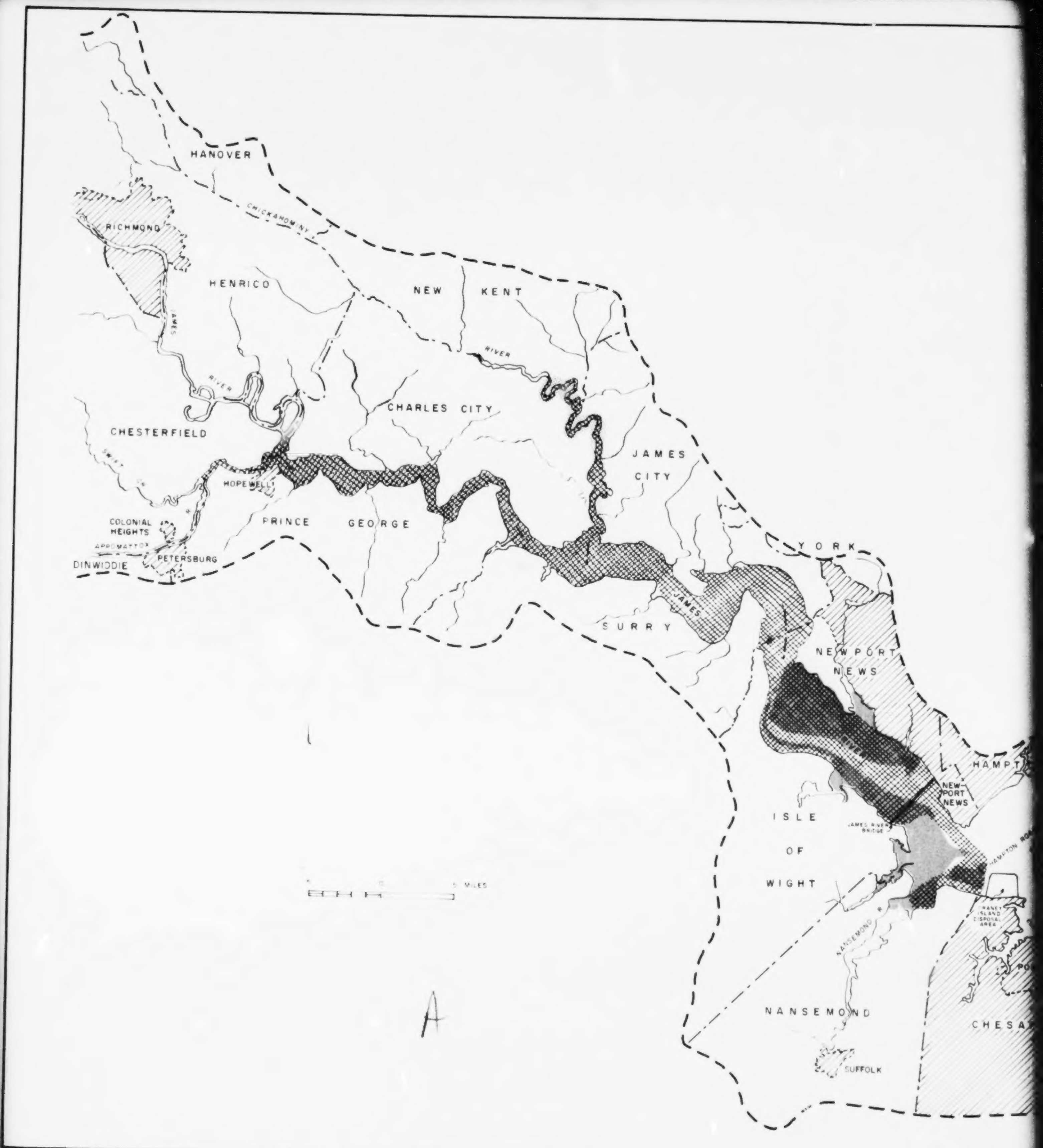
B

CHESAPEAKE BAY AREA

COMMERCIAL FISHERY

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

PLATE 5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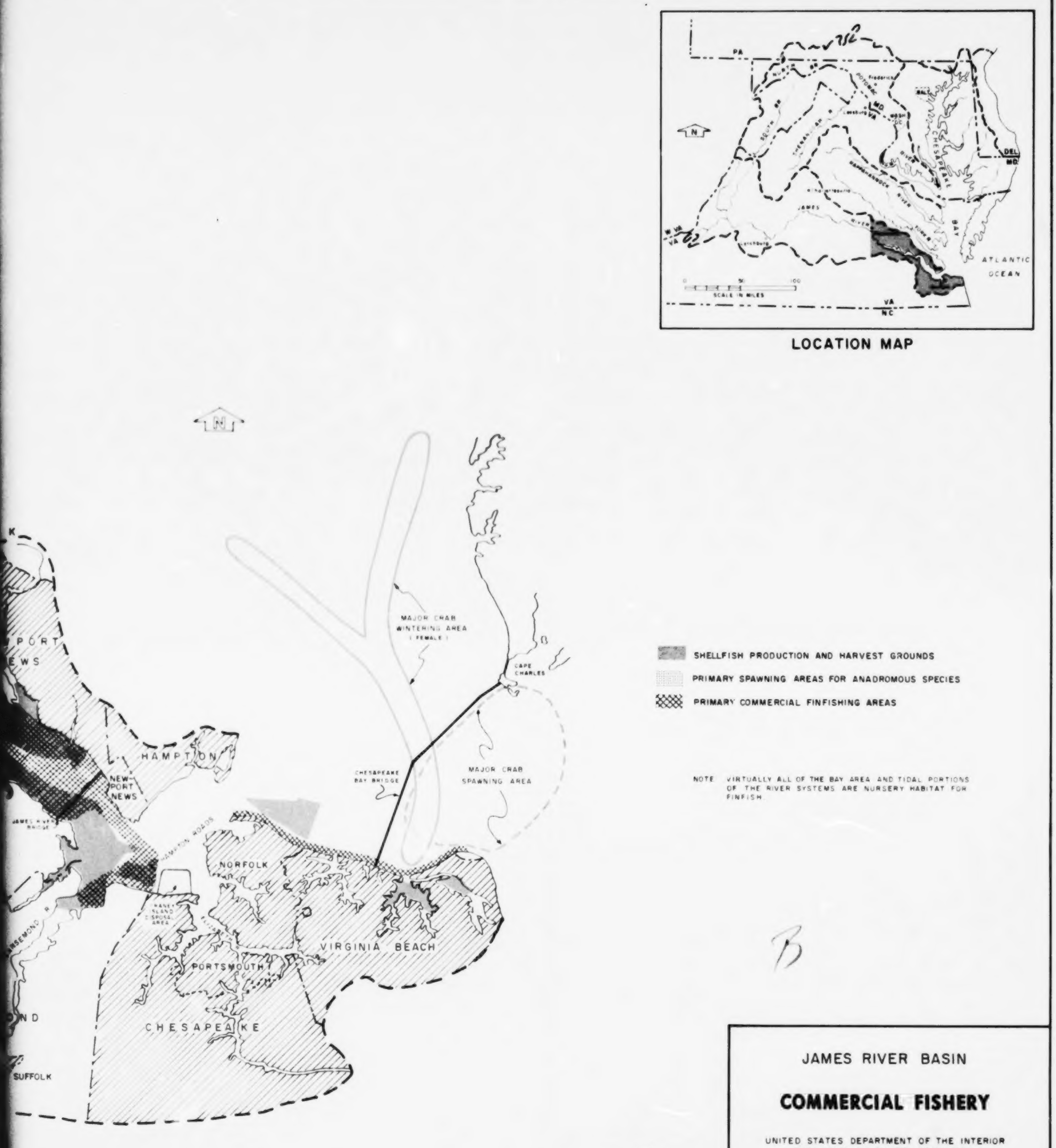
CHICKAHOMINY
RICHMOND
HENRICO
NEW KENT
JAMES
RIVER
RIVER
CHARLES CITY
CHESTERFIELD
SWIFT CR
JAMES CITY
HOPEWELL
COLONIAL HEIGHTS
PRINCE GEORGE
APPOMATTOX R
DINWIDDIE
PETERSBURG
YORK
JAMES
SURRY
NEWPORT NEWS
RIVER
HAMPT
NEW-PORT NEWS
ISLE OF WIGHT
JAMES RIVER BRIDGE
HAMPTON ROA
CRANEY ISLAND DISPOSAL AREA
NANSEMOND R
PO
NANSEMOND
CHESA
SUFFOLK
5 MILES

A



LOCATION MAP
PA
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VA
NC
ATLANTIC OCEAN
CHESAPEAKE BAY
SCALE IN MILES
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K
NEWPORT NEWS
HAMPTON
NEW-PORT NEWS
JAMES RIVER BRIDGE
HAMPTON ROADS
NORFOLK
CRANEY ISLAND DISPOSAL AREA
NANSEMOND R.
PORTSMOUTH
VIRGINIA BEACH
CHESAPEAKE
SUFFOLK
MAJOR CRAB WINTERING AREA (FEMALE)
CAPE CHARLES
CHESAPEAKE BAY BRIDGE
MAJOR CRAB SPAWNING AREA
▨ SHELLFISH PRODUCTION AND HARVEST GROUNDS
░ PRIMARY SPAWNING AREAS FOR ANADROMOUS SPECIES
▩ PRIMARY COMMERCIAL FINFISHING AREAS

NOTE VIRTUALLY ALL OF THE BAY AREA AND TIDAL PORTIONS OF THE RIVER SYSTEMS ARE NURSERY HABITAT FOR FINFISH.

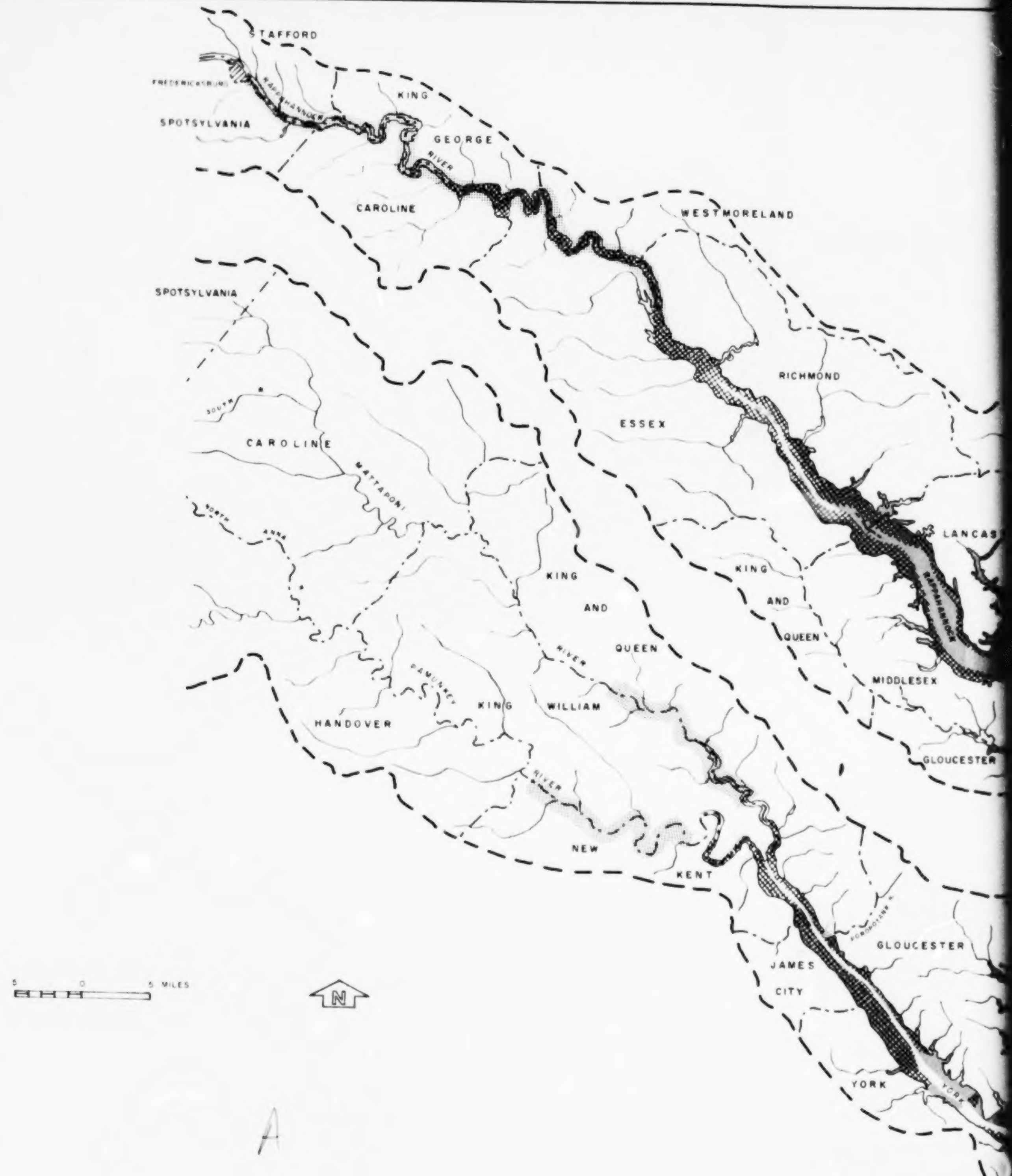
B

JAMES RIVER BASIN

COMMERCIAL FISHERY

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

PLATE 6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RAPPAHANNOCK
SPOTSYLVANIA
KING
GEORGE
RIVER
CAROLINE
WESTMORELAND
SPOTSYLVANIA
RICHMOND
SOUTH R
CAROLINE
ESSEX
MATTAPONI
NORTH ANNA R
LANCAS
KING
AND
QUEEN
KING
AND
QUEEN
RAPPAHANNOCK
RIVER
MIDDLESEX
PAMUNKEY
KING
WILLIAM
HANDOVER
GLOUCESTER
RIVER
NEW
KENT
PORPOTANK R
GLOUCESTER
JAMES
CITY
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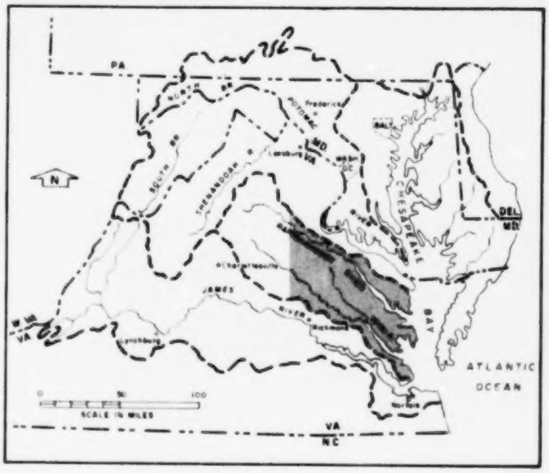
YORK
YORK

A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MD
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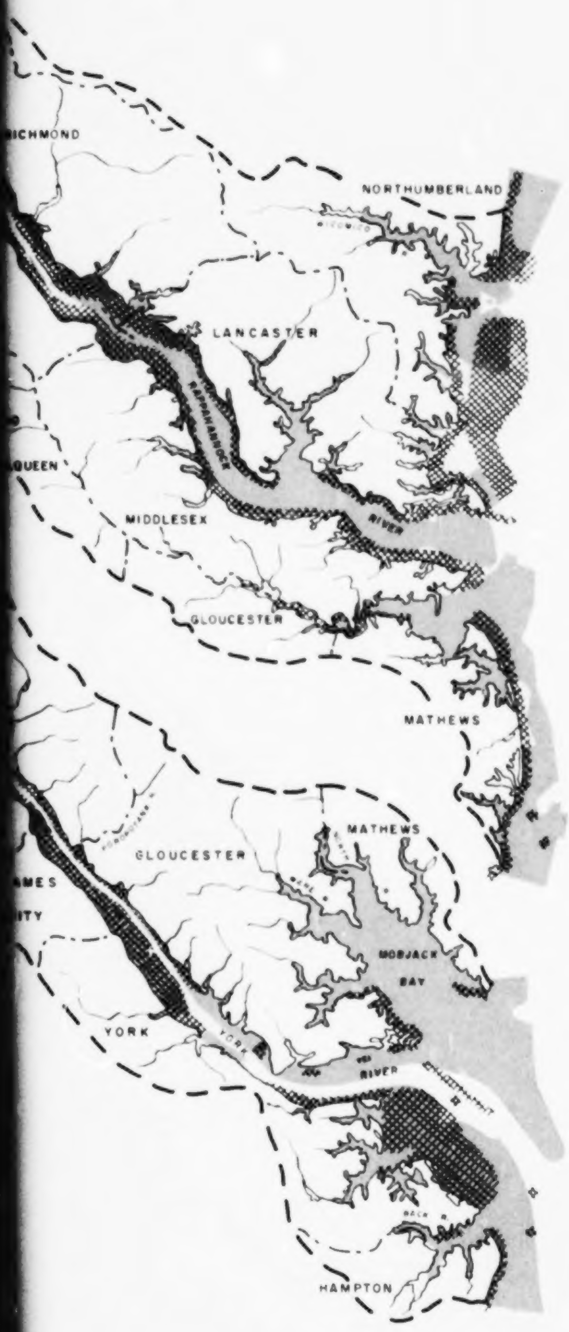
POTOMAC
CHESAPEAKE
BAY
JAMES
RIVER
Charlottesville
Richmond
Lynchburg
Norfolk
ATLANTIC
OCEAN
0 50 100
SCALE IN MILES
VA
NC

LOCATION MAP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NORTHUMBERLAND
LANCASTER
RAPPAHANNOCK
RIVER
QUEEN
MIDDLESEX
GLOUCESTER
MATHEWS
MATHEWS
GLOUCESTER
AMES
ITY
MOBJACK
BAY
YORK
YORK
RIVER
HAMPTON

▨ SHELLFISH PRODUCTION AND HARVEST GROUNDS

░ PRIMARY SPAWNING AREAS FOR ANADROMOUS SPECIES

▩ PRIMARY COMMERCIAL FINFISHING AREAS

NOTE: VIRTUALLY ALL OF THE BAY AREA AND TIDAL PORTIONS OF THE RIVER SYSTEMS ARE NURSERY HABITAT FOR FINFISH.

B

RAPPAHANNOCK AND YORK RIVER BASINS
VIRGINIA

COMMERCIAL FISHERY

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

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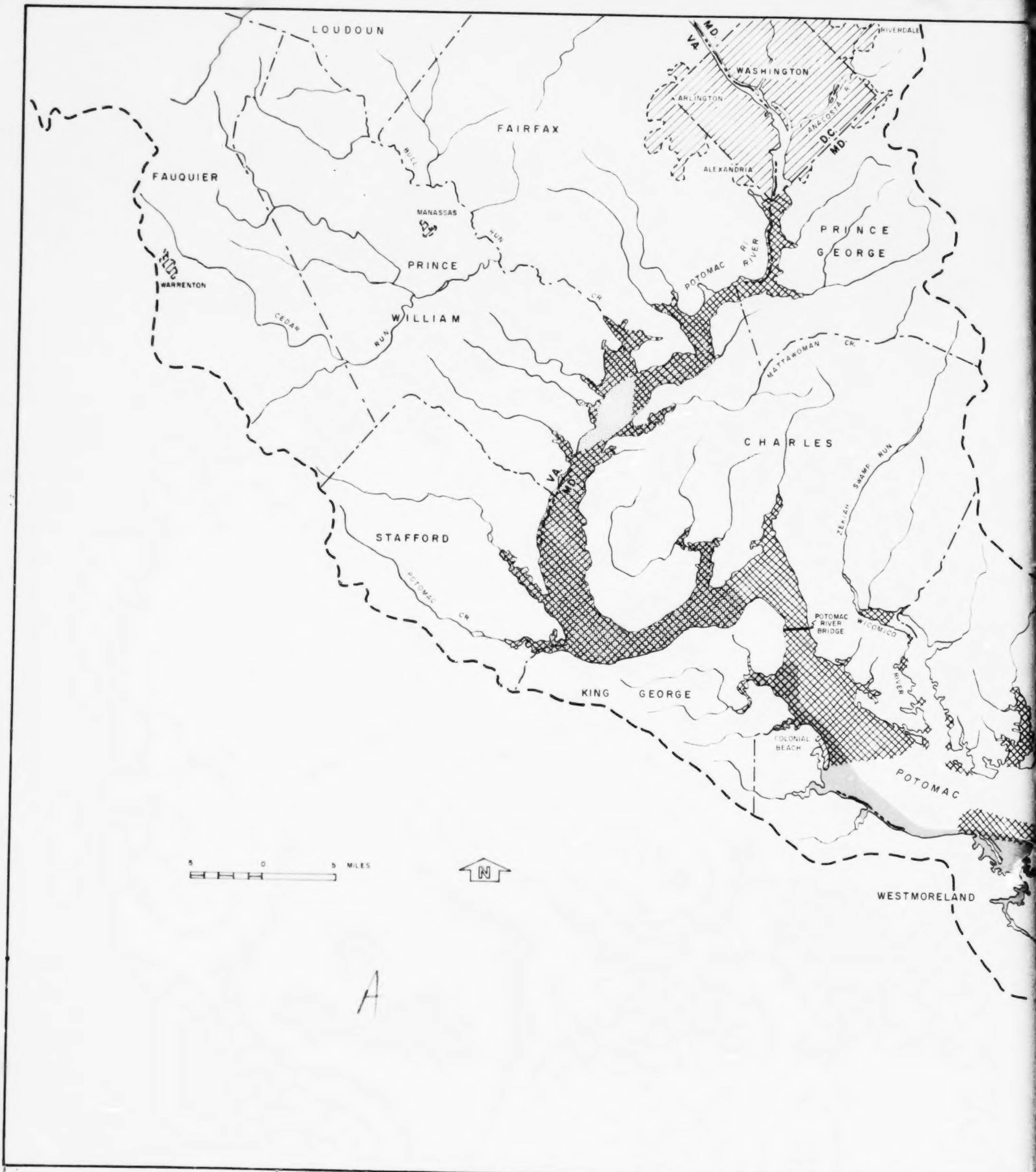
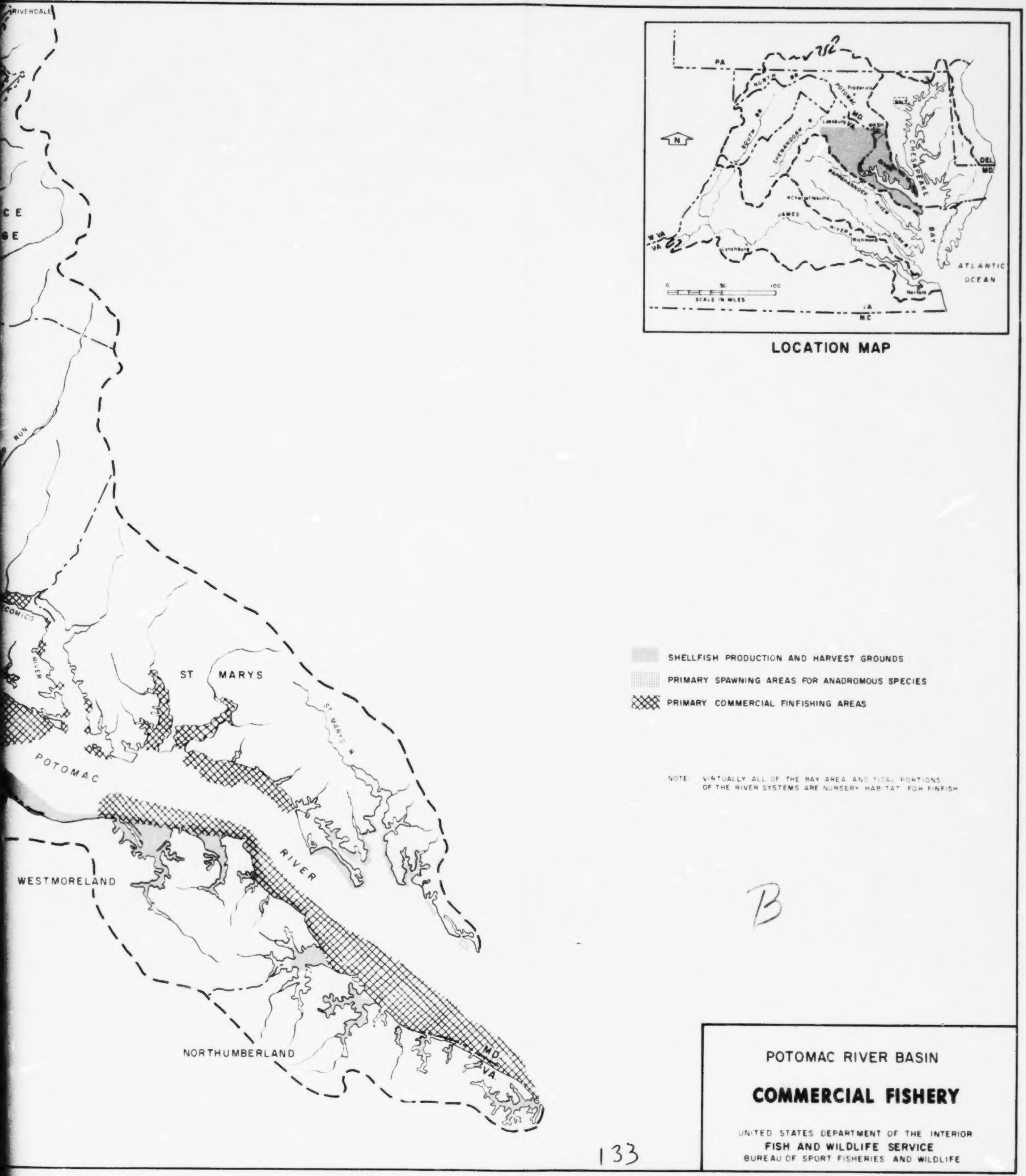
PLATE 7


LOUDOUN
VA.
MD.
RIVERDALE
WASHINGTON
ARLINGTON
ANACOSTIA R.
D.C.
MD.
ALEXANDRIA
FAIRFAX
FAUQUIER
BULL
RUN
MANASSAS
PRINCE
WILLIAM
WARRENTON
CEDAR
RUN
CR.
POTOMAC
RIVER
PRINCE
GEORGE
MATTAWOMAN CR.
CHARLES
ZEKIAH SWAMP RUN
VA.
MD.
STAFFORD
POTOMAC CR.
POTOMAC RIVER BRIDGE
WICOMICO
RIVER
KING GEORGE
COLONIAL BEACH
POTOMAC
WESTMORELAND
5 0 5 MILES
N
A


RIVERDALE
CE
GE
RUN
COMICO
RIVER
ST MARYS
ST MARYS R.
POTOMAC
RIVER
WESTMORELAND
NORTHUMBERLAND
MD.
VA.
PA
NORTH
SOUTH BR.
POTOMAC
SHENANDOAH
Frederick
Leesburg
MD.
VA.
BALT.
N
W.VA.
VA.
DEL.
MD.
CHESAPEAKE
BAY
RAPPAHANNOCK RIVER
YORK R.
JAMES RIVER
Charlottesville
Lynchburg
Richmond
Norfolk
ATLANTIC OCEAN
VA
NC
0 50 100
SCALE IN MILES
LOCATION MAP
▨ SHELLFISH PRODUCTION AND HARVEST GROUNDS
▨ PRIMARY SPAWNING AREAS FOR ANADROMOUS SPECIES
▨ PRIMARY COMMERCIAL FINFISHING AREAS
NOTE: VIRTUALLY ALL OF THE BAY AREA AND TIDAL PORTIONS OF THE RIVER SYSTEMS ARE NURSERY HABITAT FOR FINFISH

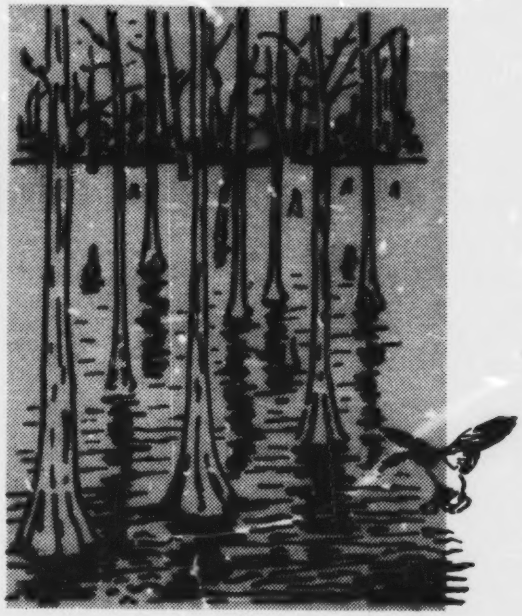
B

POTOMAC RIVER BASIN

COMMERCIAL FISHERY

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

PLATE 8



WILDLIFE RESOURCES

(TABLES 13-17 and PLATES 9-12)

TABLE 13

SUMMARY OF WETLAND WILDLIFE HABITAT*

CHESAPEAKE BAY AND TRIBUTARIES (EXCEPT SUSQUEHANNA RIVER BASIN)

BASIN	WATERFOWL VALUE (ACRES)				
	HIGH	MODERATE	LOW	NEGLIGIBLE	TOTAL
Chesapeake Bay Area	110,630	119,420	110,630	38,560	379,240
James River Basin	13,700	4,250	19,150	73,350	110,450
Rappahannock-York R. B.	6,350	24,600	51,550	20,150	102,650
Potomac River Basin	360	6,750	9,500	5,050	21,660
Total Study Area	131,040	155,020	190,830	137,110	614,000

* Based on "Wetlands of the United States," 1956, FWS Circular 39.

TABLE 14

WETLAND WILDLIFE HABITAT*

CHESAPEAKE BAY AREA

STATE AND COUNTY[1]	WATERFOWL VALUE (ACRES)				
	HIGH	MODERATE	LOW	NEGLIGIBLE	TOTAL
Delaware			2,500	500	3,000
Kent[2]			1,000		1,000
Sussex[2]			1,500	500	2,000
Maryland	106,680	80,620	45,730	38,060	271,090
Anne Arundel	630	2,260	1,140		4,030
Baltimore	1,500	220			1,720
Calvert		2,460			2,460
Caroline	1,890	730	1,010		3,630
Cecil[2]	560	1,250	850	180	2,840
Charles[2]		380			380
Dorchester	68,600	19,160	4,020	23,580	115,360
Harford[2]	6,440	1,020	100		7,560
Kent	2,910	1,180	60		4,150
Prince Georges[2]	770	5,350			6,120
Queen Annes	1,170	1,960	840		3,970
Somerset	4,870	28,100	22,950	2,110	58,030
Talbot	3,760	380	1,180		5,320
Wicomico	6,920	4,190	7,000	1,070	19,180
Worcester	6,660	11,980	6,580	11,120	36,340
Pennsylvania					None
Virginia	3,950	38,800	62,400		105,150
Accomack	3,950	25,400	42,300		71,650
Northampton		13,400	20,100		33,500
TOTAL	110,630	119,420	110,630	38,560	379,240

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* Based on "Wetlands of the United States," 1956, FWS Circular 39.

1. Includes only counties with significant wetlands.

2. Includes only basin portion of county.

TABLE 15

WETLAND WILDLIFE HABITAT*

JAMES RIVER BASIN

STATE AND COUNTY[1]	WATERFOWL VALUE (ACRES) HIGH	MODERATE	LOW	NEGLIGIBLE	TOTAL
Virginia	13,700	4,250	19,150	73,350	110,450
Amelia				3,600	3,600
Charles City	3,300	1,150	1,900	1,000	7,350
Chesapeake, City of[2]				26,900	26,900
Chesterfield	2,600			6,700	9,300
Cumberland		350			350
Dinwiddie[2]				950	950
Hampton, City of[2]				300	300
Hanover[2]			2,400	350	2,750
Henrico	1,600	100	6,800		8,500
Isle of Wight[2]		500	3,900	900	5,300
James City[2]	3,400		350	2,900	6,650
Nansemond[2]				22,400	22,400
New Kent[2]	400	1,300	500	2,000	4,200
Newport News, City of[2]			2,600	200	2,800
Powhatan				550	550
Prince George[2]	650	350	200	1,200	2,400
Surry[2]	1,750	500	500	1,650	4,400
Virginia Beach, City of[2]				1,700	1,700
York[2]				50	50
TOTAL	13,700	4,250	19,150	73,350	110,450

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* Based on "Wetlands of the United States," 1956, FWS Circular 39.

1. Includes only counties with significant wetlands.
2. Includes only basin portion of county.

TABLE 16

WETLAND WILDLIFE HABITAT*

RAPPAHANNOCK-YORK RIVER BASINS

STATE AND COUNTY[1]	WATERFOWL VALUE (ACRES)				
	HIGH	MODERATE	LOW	NEGLIGIBLE	TOTAL
Virginia	6,350	24,600	51,550	20,150	102,650
Carolina		1,200	12,400	600	14,200
Essex	3,500	2,700	1,300	2,300	9,800
Gloucester		2,600	4,950	2,600	10,150
Hampton, City of[2]				2,200	2,200
Hanover[2]			3,600	2,800	6,400
James City[2]				100	100
King and Queen		4,250	6.050	2,850	13,150
King George[2]		850	1,250		2,100
King William	1,400	2,200	7,650	1,300	12,550
Lancaster			700	1,500	2,200
Mathews			4,000	800	4,800
Middlesex		2,100	200	700	3,000
New Kent[2]	1,450	3,750	1,200	700	7,100
Northumberland[2]			550		550
Richmond		4,200	350	250	4,800
Spotsylvania			500	800	1,300
Westmoreland[2]		750	50	150	950
York[2]			6,800	500	7,300
TOTAL	6,350	24,600	51,550	20,150	102,650

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* Based on "Wetlands of the United States," 1956, FWS Circular 39.

1. Includes only counties with significant wetlands.
2. Includes only basin portion of county.

TABLE 17

WETLAND WILDLIFE HABITAT*

POTOMAC RIVER BASIN

STATE AND COUNTY[1]	WATERFOWL VALUE (ACRES) HIGH	MODERATE	LOW	NEGLIGIBLE	TOTAL
Maryland	360	6,500	3,150		10,010
Charles[2]	360	6,000	570		6,930
Prince Georges[2]		500	2,580		3,080
Pennsylvania					None
Virginia		250	6,350	5,050	11,650
Fairfax			1,100	200	1,300
King George[2]			300	1,750	2,050
Northumberland[2]		50	500		550
Prince William			1,600	900	2,500
Stafford[2]			1,500	900	2,400
Westmoreland[2]		200	1,350	1,300	2,850
West Virginia					None
TOTAL	360	6,750	9,500	5,050	21,660

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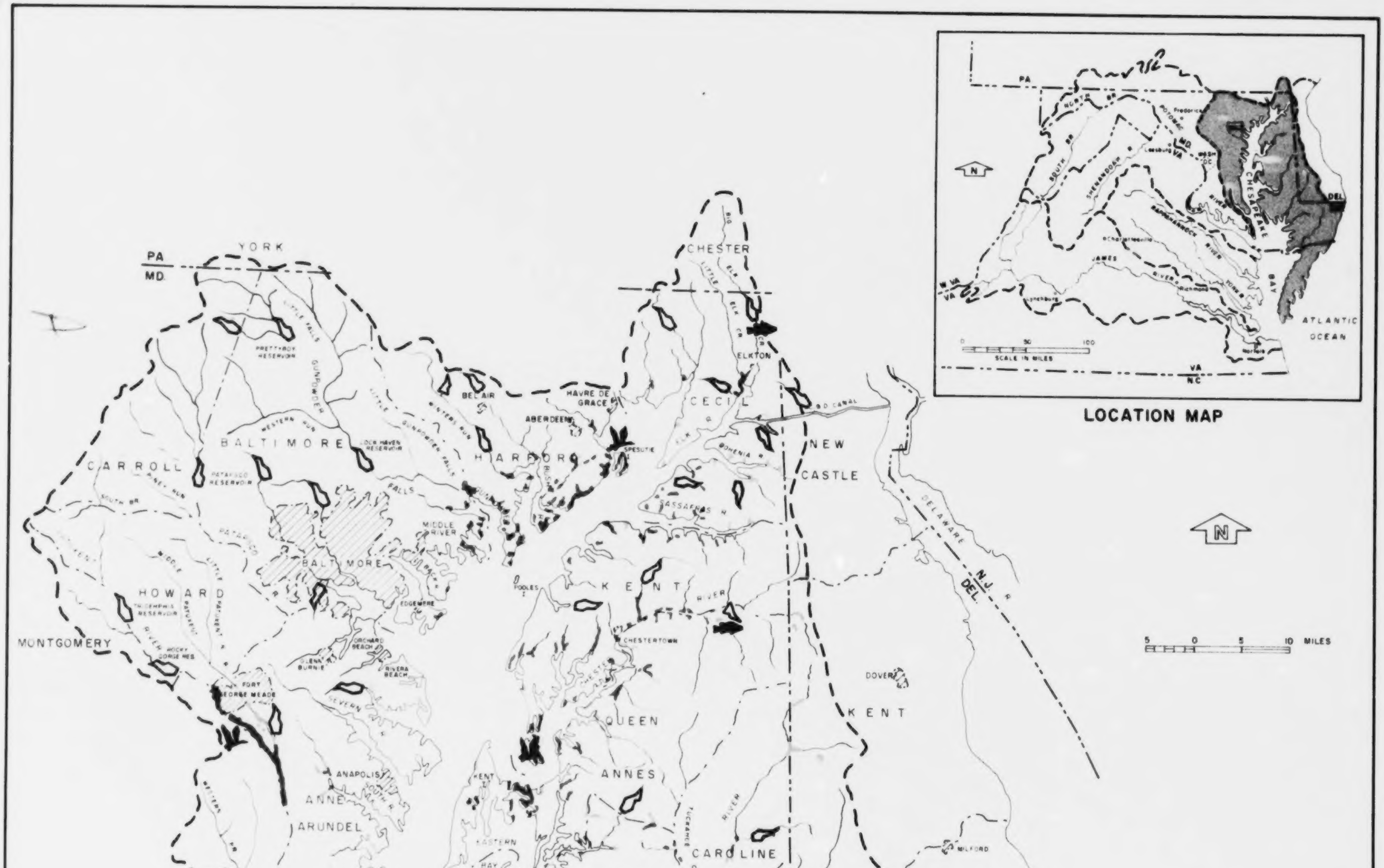
* Based on "Wetlands of the United States," 1956, FWS Circular 39.

1. Includes only counties with significant wetlands.

2. Includes only basin portion of county.

PA
MD.
YORK
CHESTER
BIG ELK CR
LITTLE ELK CR
ELKTON
CECIL
NEW CASTLE
C & D CANAL
BOHEMIA R
SASSAFRAS R
DELAWARE R
N.J.
DEL.
CARROLL
BALTIMORE
HARFORD
HOWARD
MONTGOMERY
PRETTYBOY RESERVOIR
GUNPOWDER
LITTLE FALLS
WESTERN RUN
LOCH RAVEN RESERVOIR
LITTLE GUNPOWDER FALLS
WINTERS RUN
BEL AIR
HAVRE DE GRACE
ABERDEEN
SPESUTIE
BUSH R
MIDDLE RIVER
PATAPSCO RESERVOIR
PINEY RUN
SOUTH BR
PATAPSCO
MIDDLE
LITTLE PATUXENT R
PATUXENT
TRIADELPHIA RESERVOIR
ROCKY GORGE RES.
BALTIMORE
EDGEMERE
POOLES I
ORCHARD BEACH
GLENN BURNIE
RIVERA BEACH
FORT GEORGE MEADE
SEVERN R
ANNAPOLIS
SOUTH R
ANNE ARUNDEL
WESTERN BR
PRINCE GEORGES
CHARLES
CALVERT
CHESAP
KENT
RIVER
CHESTERTOWN
QUEEN ANNES
KENT I
EASTERN BAY
CAROLINE
TUCKAHOE CR
TALBOT
EASTON
CHOPTANK
CAMBRIDGE
DORCHESTER
MARSHYHOPE CR
NANTICOKE R
BROAD CR
JAMES BR
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KENT
DOVER
MILFORD
MILTON
REHOBOTH BEACH
SUSSEX
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NORTH BR
SOUTH BR
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Frederick
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Leesburg
WASH. D.C.
SHENANDOAH R
RAPPAHANNOCK RIVER
Charlottesville
JAMES RIVER
Richmond
YORK R
Lynchburg
Norfolk
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SCALE IN MILES
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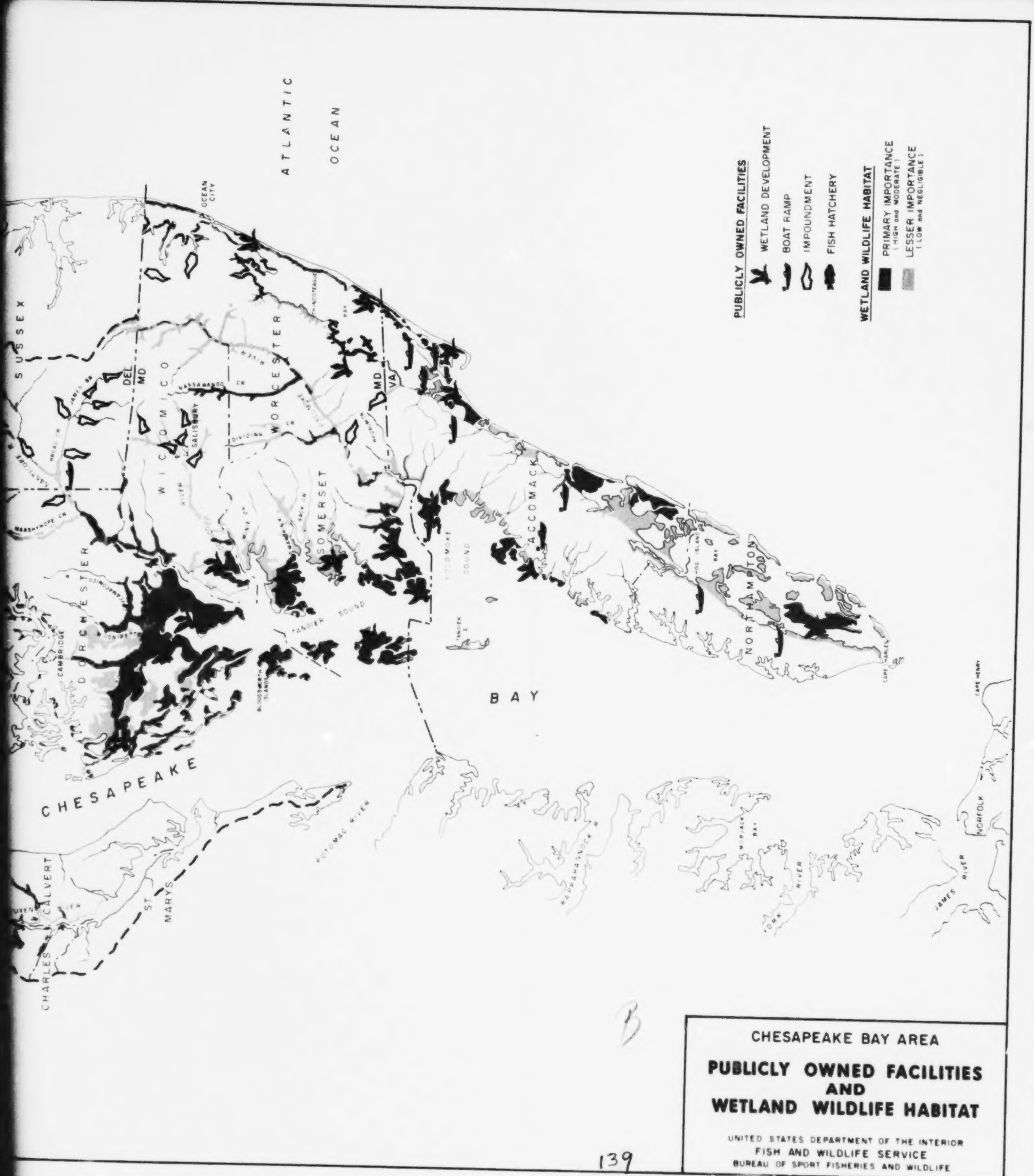
LOCATION MAP


ATLANTIC
OCEAN
PUBLICLY OWNED FACILITIES
WETLAND DEVELOPMENT
BOAT RAMP
IMPOUNDMENT
FISH HATCHERY
WETLAND WILDLIFE HABITAT
PRIMARY IMPORTANCE (HIGH and MODERATE)
LESSER IMPORTANCE (LOW and NEGLIGIBLE)
SUSSEX
OCEAN CITY
DEL
MD
WICOMICO
SALISBURY
NASSAWANGO CR
WORCESTER
DIVIDING CR
MD
VA
ACCOMACK
SOMERSET
DORCHESTER
CAMBRIDGE
MARSHYHOPE CR
TANGIER SOUND
POCOMOKE SOUND
BLOODSWORTH ISLANDS
TANGIER I
NORTHAMPTON
HOG ISLAND BAY
CAPE CHARLES
CAPE HENRY
CHESAPEAKE
BAY
CALVERT
ST. MARYS
CHARLES
POTOMAC RIVER
RAPPAHANNOCK R
MOBJACK BAY
YORK RIVER
JAMES RIVER
NORFOLK

B

CHESAPEAKE BAY AREA

PUBLICLY OWNED FACILITIES AND WETLAND WILDLIFE HABITAT

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

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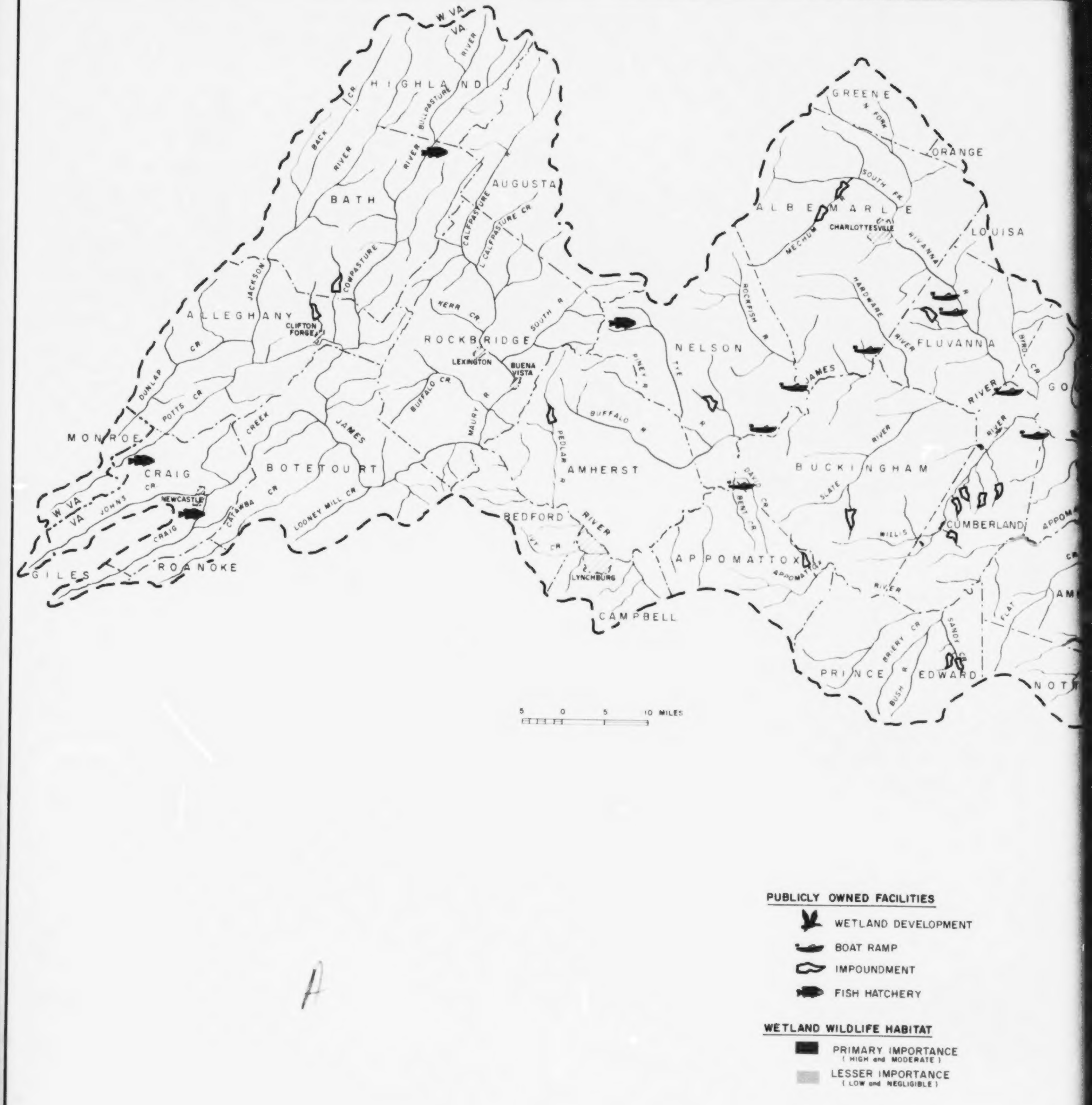
PLATE 9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VA
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GREENE
ORANGE
AUGUSTA
BATH
ALBEMARLE
CHARLOTTESVILLE
LOUISA
ALLEGHANY
CLIFTON FORGE
ROCKBRIDGE
LEXINGTON
BUENA VISTA
NELSON
FLUVANNA
MONROE
CRAIG
BOTETOURT
AMHERST
BUCKINGHAM
NEWCASTLE
BEDFORD
CUMBERLAND
APPOMATTOX
LYNCHBURG
GILES
ROANOKE
CAMPBELL
PRINCE EDWARD
BACK CR
BACK RIVER
BULLPASTURE RIVER
CALFPASTURE
L CALFPASTURE CR
COWPASTURE
JACKSON
KERR CR
SOUTH R
DUNLAP CR
POTTS CR
CREEK
JAMES
BUFFALO CR
MAURY R
PINEY R
TYE R
BUFFALO R
PEDLAR R
JOHNS CR
CRAIG CR
CATAWBA CR
LOONEY MILL CR
RIVER
IVY CR
S FORK
SOUTH FK
MECHUM
RIVANNA R
ROCKFISH R
HARDWARE RIVER
BYRD CR
DAVID CR
BENT CR
SLATE RIVER
WILLIS
APPOMATTOX
BRIERY CR
BUSH R
SANDY R
FLAT
5 0 5 10 MILES
PUBLICLY OWNED FACILITIES
WETLAND DEVELOPMENT
BOAT RAMP
IMPOUNDMENT
FISH HATCHERY
WETLAND WILDLIFE HABITAT
PRIMARY IMPORTANCE (HIGH and MODERATE)
LESSER IMPORTANCE (LOW and NEGLIGIBLE)

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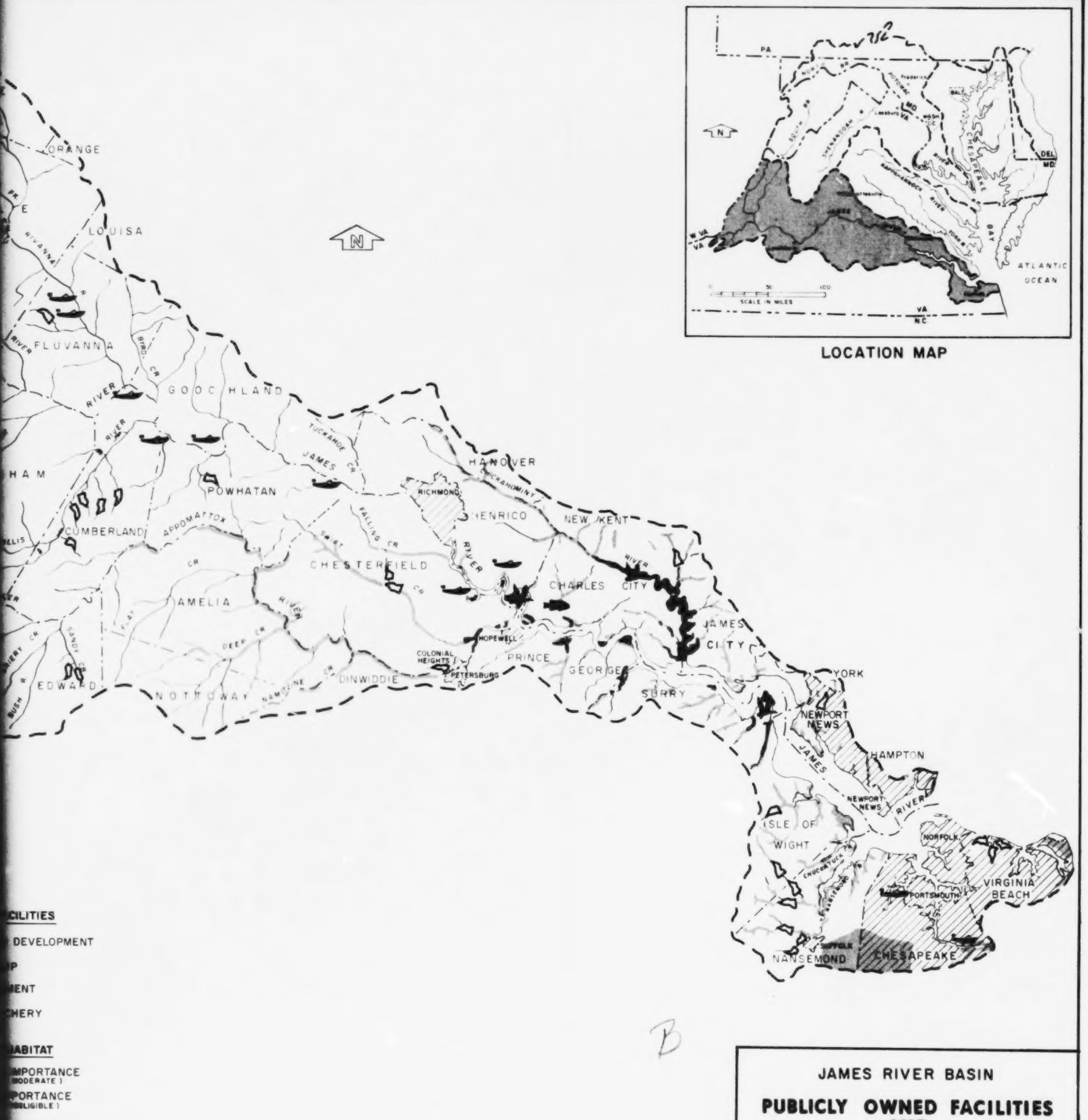

LOCATION MAP
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NC
CHESAPEAKE
BAY
ATLANTIC OCEAN
SCALE IN MILES
252
N
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LOUISA
RIVANNA
FLUVANNA
GOOCHLAND
POWHATAN
CUMBERLAND
APPOMATTOX
AMELIA
CHESTERFIELD
RICHMOND
HENRICO
HANOVER
CHICKAHOMINY
NEW KENT
CHARLES CITY
JAMES CITY
HOPEWELL
COLONIAL HEIGHTS
PETERSBURG
PRINCE GEORGE
DINWIDDIE
NOTTOWAY
EDWARD
SURRY
YORK
NEWPORT NEWS
HAMPTON
JAMES RIVER
ISLE OF WIGHT
NORFOLK
PORTSMOUTH
VIRGINIA BEACH
SUFFOLK
NANSEMOND
CHESAPEAKE
TUCKAHOE CR
FALLING CR
DEER CR
NAMOZINE CR
SANDY CR
BUSH R
BYRD CR
CILITIES
DEVELOPMENT
P
ENT
CHERY
ABITAT
MPORTANCE (MODERATE)
PORTANCE (NEGLIGIBLE)

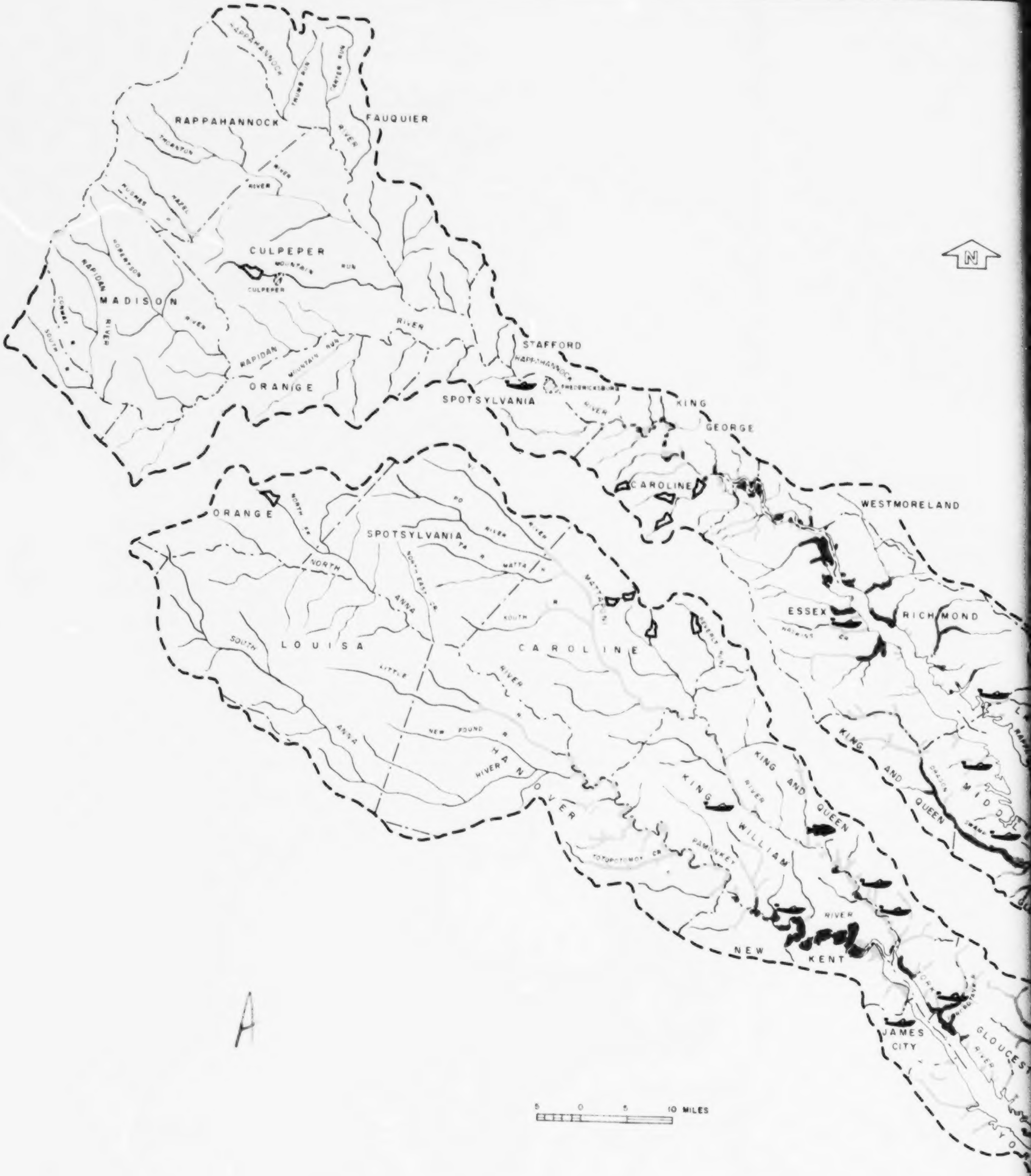
B

JAMES RIVER BASIN

PUBLICLY OWNED FACILITIES AND WETLAND WILDLIFE HABITAT

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

PLATE 10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CARTER RUN
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CULPEPER
MOUNTAIN
RUN
CULPEPER
ROBERTSON
RAPIDAN
MADISON
CONWAY
SOUTH
RIVER
RIVER
RIVER
RAPIDAN
MOUNTAIN RUN
ORANGE
STAFFORD
RAPPAHANNOCK
FREDERICKSBURG
SPOTSYLVANIA
RIVER
KING
GEORGE
CAROLINE
WESTMORELAND
ORANGE
NORTH FK
PO
RIVER
RIVER
SPOTSYLVANIA
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MATTA
R
NORTH
NORTH EAST CR
ANNA
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SOUTH
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ESSEX
HOSKINS CR
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LOUISA
CAROLINE
BEVERLY RUN
LITTLE
RIVER
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ANNA
NEW FOUND
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HANOVER
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KING
AND
QUEEN
KING
AND
QUEEN
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WILLIAM
RIVER
DRAGON
SWAMP
MIDDL
RAPP
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YORK
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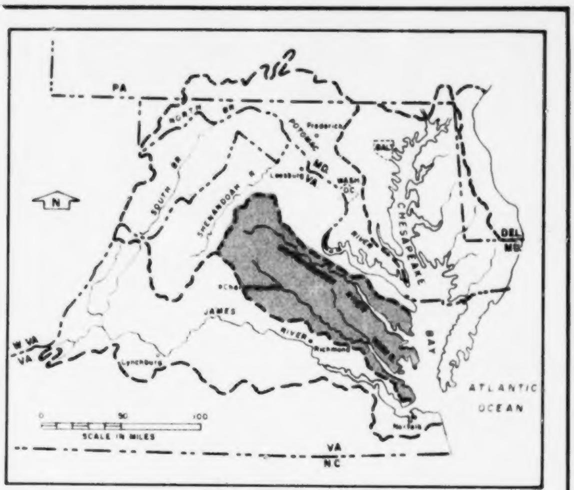
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Wash DC
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JAMES RIVER
CHESAPEAKE BAY
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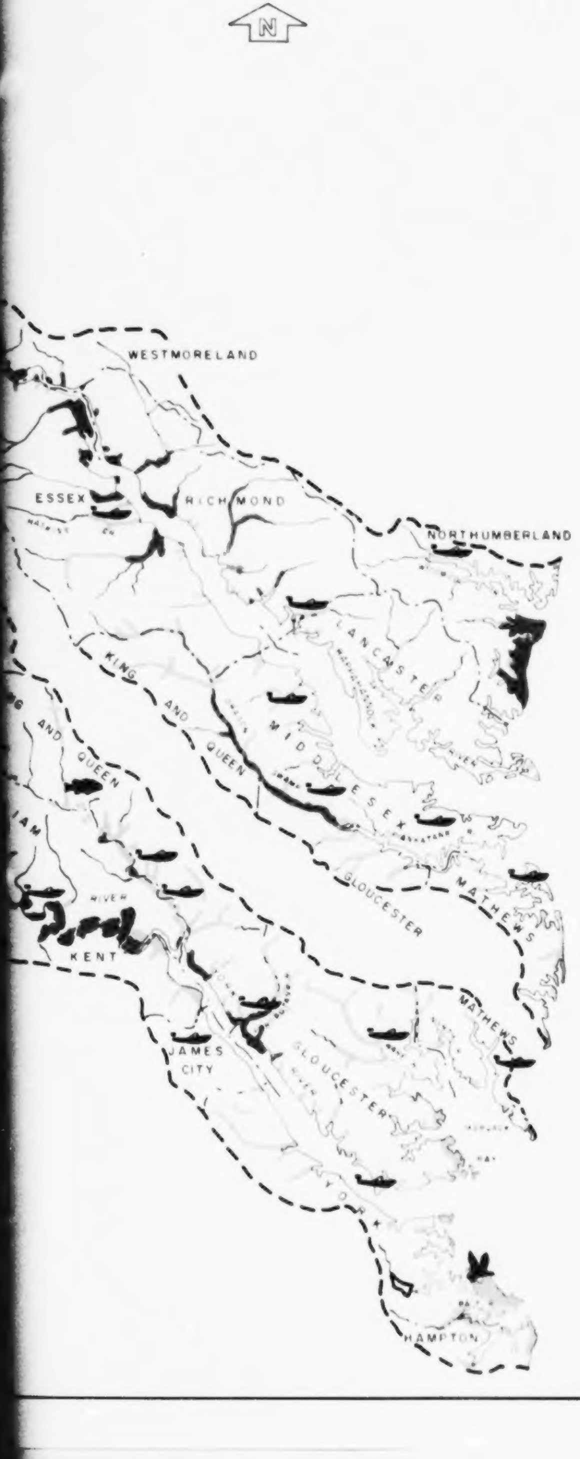
SCALE IN MILES

LOCATION MAP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RIVER
KENT
JAMES CITY
HAMPTON

PUBLICLY OWNED FACILITIES

- WETLAND DEVELOPMENT
- BOAT RAMP
- IMPOUNDMENT
- FISH HATCHERY

WETLAND WILDLIFE HABITAT

- ■ PRIMARY IMPORTANCE (HIGH and MODERATE)
- ▨ LESSER IMPORTANCE (LOW and NEGLIGIBLE)

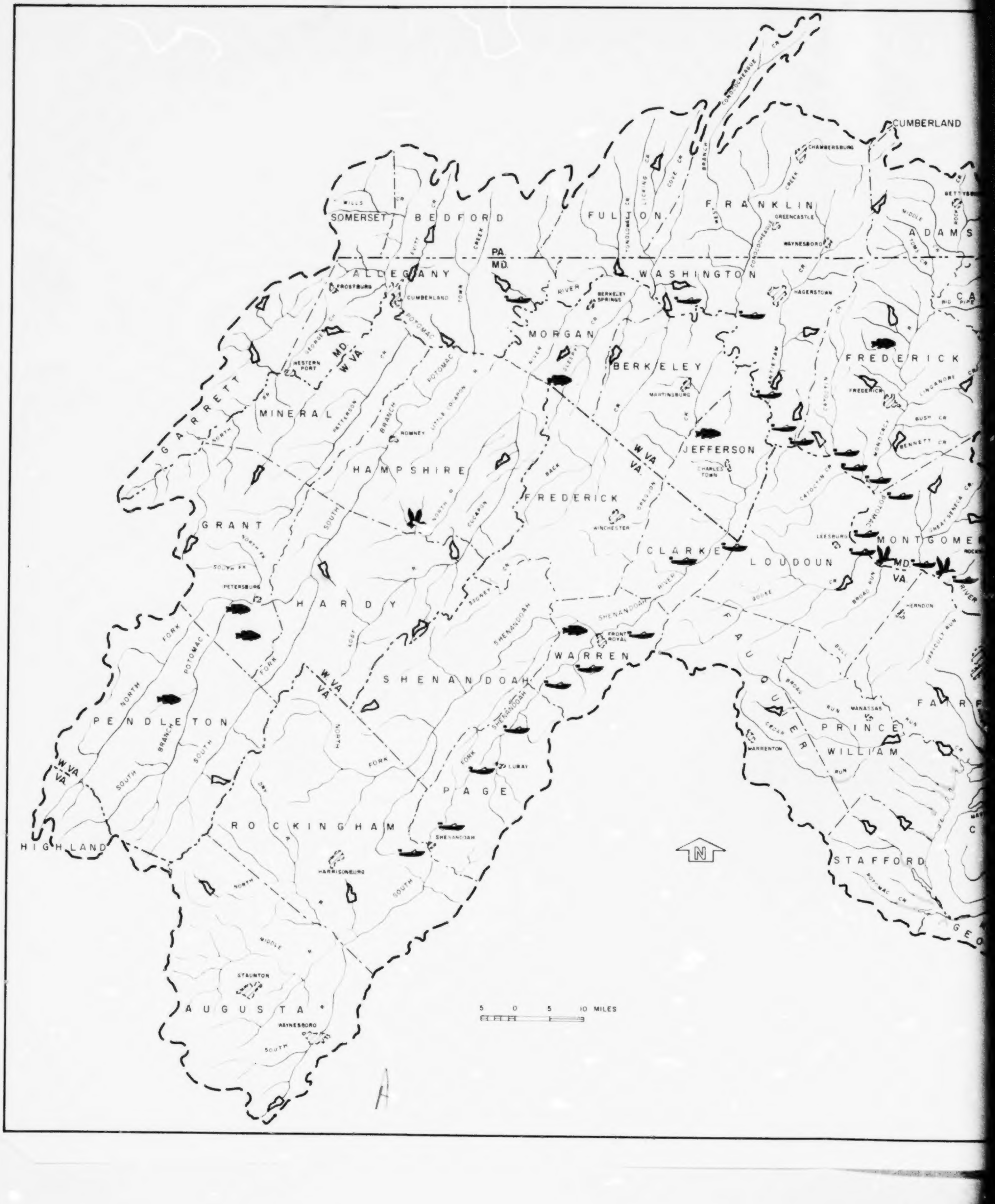
B

RAPPAHANNOCK AND YORK RIVER BASINS
VIRGINIA

PUBLICLY OWNED FACILITIES AND WETLAND WILDLIFE HABITAT

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

PLATE 11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MD
ALLEGANY
WASHINGTON
FROSTBURG
CUMBERLAND
BERKELEY SPRINGS
HAGERSTOWN
MORGAN
BERKELEY
MARTINSBURG
FREDERICK
FREDERICK
GARRETT
WESTERN PORT
MD
W VA
MINERAL
ROMNEY
HAMPSHIRE
JEFFERSON
CHARLES TOWN
W VA
VA
FREDERICK
WINCHESTER
GRANT
PETERSBURG
CLARKE
LOUDOUN
LEESBURG
MONTGOMERY
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HARDY
HERNDON
FRONT ROYAL
WARREN
SHENANDOAH
FAUQUIER
W VA
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PENDLETON
MANASSAS
PRINCE WILLIAM
WARRENTON
FAIRFAX
LURAY
PAGE
W VA
VA
HIGHLAND
ROCKINGHAM
SHENANDOAH
HARRISONBURG
STAFFORD
STAUNTON
AUGUSTA
WAYNESBORO
POTOMAC
SHENANDOAH
CONOCOCHEAGUE CR
ANTIETAM CR
CATOCTIN CR
MONOCACY
OPEQUON
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NORTH FORK
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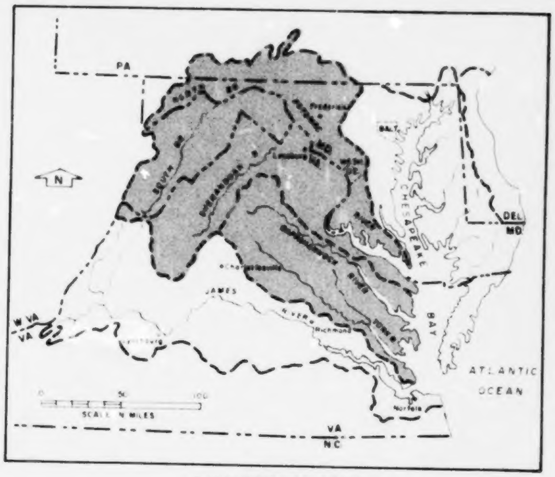
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JAMES
RIVER
RICHMOND
NORFOLK
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SCALE IN MILES
VA
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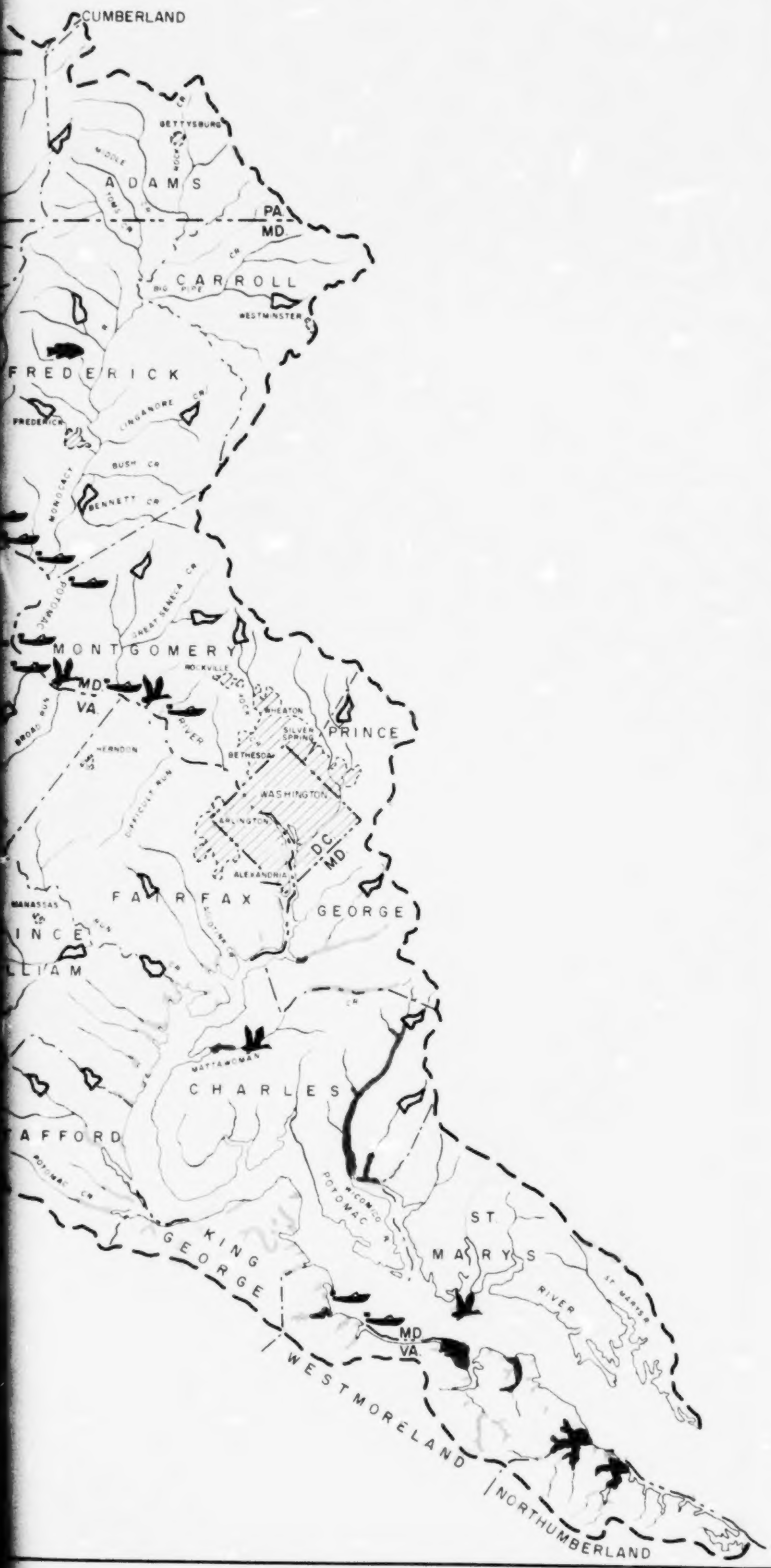
LOCATION MAP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CARROLL
WESTMINSTER
FREDERICK
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LINGANORE CR
BUSH CR
BENNETT CR
MONOCACY
POTOMAC
SENECA CR
MONTGOMERY
ROCKVILLE
MD
VA
BROAD RUN
HERNDON
WHEATON
SILVER SPRING
BETHESDA
PRINCE
WASHINGTON
ARLINGTON
D.C.
MD
ALEXANDRIA
DIFFICULT RUN
MANASSAS
FAIRFAX
GEORGE
INCE
LLIAM
MATTAWOMAN
CHARLES
AFFORD
POTOMAC CR
KING
GEORGE
POTOMAC
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MARYS
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ST MARYS
MD
VA
WESTMORELAND
NORTHUMBERLAND

PUBLICLY OWNED FACILITIES

- WETLAND DEVELOPMENT
- BOAT RAMP
- IMPOUNDMENT
- FISH HATCHERY

WETLAND WILDLIFE HABITAT

- ■ PRIMARY IMPORTANCE (HIGH and MODERATE)
- ▒ LESSER IMPORTANCE (LOW and NEGLIGIBLE)

B

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POTOMAC RIVER BASIN

PUBLICLY OWNED FACILITIES AND WETLAND WILDLIFE HABITAT

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

PLATE 12

PUBLICLY OWNED FACILITIES

(TABLES 18-22)

TABLE 18

SUMMARY OF PUBLICLY OWNED FISHERY AND WETLAND WILDLIFE FACILITIES

CHESAPEAKE BAY AND TRIBUTARIES (EXCEPT SUSQUEHANNA RIVER BASIN)

BASIN	FISH HATCHERIES	BOAT RAMPS[1]	IMPOUNDMENTS[2]		WETLAND DEVELOPMENTS	
			NUMBER	WATER AREA (ACRES)	NUMBER	TOTAL AREA (ACRES)
Chesapeake Bay Area	2	16	37	9,139	22	87,464
James River Basin	5	15	32	8,913	3	4,205
Rappahannock-York R. B.	1	17	11	793	1	1,700
Potomac River Basin	8	26	50	6,456	4	1,060
Total Study Area	16	74	130	25,301	30	94,429

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1. Does not include ramps on public impoundments.
2. Includes only impoundments open to public fishing.

TABLE 19

PUBLICLY OWNED FISHERY AND WETLAND WILDLIFE FACILITIES

CHESAPEAKE BAY AREA

STATE AND COUNTY[1]	FISH HATCHERIES	BOAT RAMPS[2]	IMPOUNDMENTS[3]		WETLAND DEVELOPMENTS	
			NUMBER	WATER AREA (ACRES)	NUMBER	TOTAL AREA (ACRES)
Delaware	None	1	8	546	None	None
New Castle[4]			1	201		
Sussex[4]		1	7	345		
Maryland	2	6	29	8,593	18	66,724
Anne Arundel		1	3	15	1	2,698
Baltimore			6	7,085		
Calvert			1	2		
Caroline		1	2	48		
Carroll			1	1		
Cecil[4]	1		4	97		
Dorchester		2			4	26,689
Harford[4]			3	93	1	2,904
Howard			2	1,100		
Kent			1	35	1	2,286
Prince Georges[4]					1	313
Queen Annes	1		2	96		
Somerset					5	19,402
Wicomico			3	13	1	1,913
Worcester		2	1	8	4	10,519
Pennsylvania	None	None	None	None	None	None
Virginia	None	9	None	None	4	20,740
Accomack		7			3	11,630
Northampton		2			1	9,110
TOTAL	2	16	37	9,139	22	87,464

---

1. Includes only counties with facilities.
2. Does not include ramps located on public impoundments.
3. Includes only impoundments open to public fishing.
4. Includes only basin portion of county.

TABLE 20

PUBLICLY OWNED FISHERY AND WETLAND WILDLIFE FACILITIES

JAMES RIVER BASIN

STATE AND COUNTY[1]	FISH HATCHERIES	BOAT[2] RAMPS	IMPOUNDMENTS[3]		WETLAND DEVELOPMENTS	
			NUMBER	WATER AREA (ACRES)	NUMBER	TOTAL AREA (ACRES)
Virginia	5	15	32	8,913	3	4,205
Albemarle[4]		2	2	163		
Alleghany			1	16		
Amherst			1	75		
Appomattox[4]		1	1	145		
Bath	1		1	60		
Buckingham			1	20		
Charles City	1		1	782		
Chesapeake, City of[4]		2				
Chesterfield		1	3	306	1	1,320
Craig[4]						
Cumberland			1	93		
Fluvanna			1	70		
Goochland		1				
Henrico		1				
Isle of Wight[4]			3	618		
Nansemond[4]			4	3,288		
Nelson	1	1	1	45		
New Kent[4]			1	1,700	1	400
Newport News, City of[4]			1	400		
Powhatan	—	1	1	66		
Prince Edward			2	47		
Rockbridge		1				
Surry[4]					1	2,485
Virginia Beach, City of[4]			3	1,029		
TOTAL	5	15	32	8,913	3	4,205

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1. Includes only counties with facilities.
2. Does not include ramps located on public reservoirs.
3. Includes only impoundments open to public fishing.
4. Includes only basin portion of county.

TABLE 21

PUBLICLY OWNED FISHERY AND WETLAND WILDLIFE FACILITIES

RAPPAHANNOCK-YORK RIVER BASINS

STATE AND COUNTY[1]	FISH HATCHERIES	BOAT[2] RAMPS	IMPOUNDMENTS[3]		WETLAND DEVELOPMENTS	
			NUMBER	WATER AREA (ACRES)	NUMBER	TOTAL AREA (ACRES)
Virginia	1	17	11	793	1	1,700
Caroline			8	294		
Culpeper			1	75		
Essex		1				
Gloucester[4]		3				
James City		1				
King & Queen	1	2				
King William		2				
Mathews		2				
Middlesex		3				
Northumberland[4]		1				
Orange			1	300		
Richmond		1				
Spotsylvania		1				
York[4]			1	124	1	1,700
TOTAL	1	17	11	793	1	1,700

---

1. Includes only counties with facilities.
2. Does not include ramps located on public impoundments.
3. Includes only impoundments open to public fishing.
4. Includes only basin portion of county.

TABLE 22

PUBLICLY OWNED FISHERY AND WETLAND WILDLIFE FACILITIES

POTOMAC RIVER BASIN

STATE AND COUNTY[1]	FISH HATCHERIES	BOAT[2] RAMPS	IMPOUNDMENTS[3]		WETLAND DEVELOPMENTS	
			NUMBER	WATER AREA (ACRES)	NUMBER	TOTAL AREA (ACRES)
Maryland	2	12	25	703	4	1,060
Allegany		1	4	40		
Carroll			1	1		
Charles			2	2	1	754
Frederick	1	3	5	10		
Garrett[4]			2	360		
Montgomery[4]		4	3	102	2	246
Prince Georges[4]			2	23		
St. Marys[4]		1			1	60
Washington	1	3	6	165		
Pennsylvania	None	None	3	761	None	None
Adams[4]			1	23		
Bedford[4]			1	534		
Fulton[4]			1	204		
Virginia	1	14	13	3,488	None	None
Augusta[4]			3	88		
Clarke		2				

Table 22, page 2

STATE AND COUNTY[1]	FISH HATCHERIES	BOAT[2] RAMPS	IMPOUNDMENTS[3] NUMBER	IMPOUNDMENTS[3] WATER AREA (ACRES)	WETLAND DEVELOPMENTS NUMBER	WETLAND DEVELOPMENTS TOTAL AREA (ACRES)
Virginia (con.)						
Fairfax			1	218		
Fauquier[4]			1	77		
Loudoun			1	140		
Page		3				
Prince William			2	2,080		
Rockingham		1	1	37		
Shenandoah		1	1	5		
Stafford[4]			2	768		
Warren	1	5				
Westmoreland[4]		2	1	75		
West Virginia	5	None	9	1,504	None	None
Berkeley			1	206		
Grant	2		2	1,240		
Hampshire			1	3		
Hardy			3	43		
Jefferson	1					
Morgan	1		1	6		
Pendleton	1		1	6		
TOTAL	8	26	50	6,456	4	1,060

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1. Includes only counties with facilities.
2. Does not include ramps located on public impoundments.
3. Includes only impoundments open to public fishing.
4. Includes only basin portion of county.

POLLUTION EFFECTS

(TABLES 23–38 and PLATES 13-16)

TABLE 23
SUMMARY OF POLLUTED FISH HABITAT
CHESAPEAKE BAY AREA AND TRIBUTARIES (EXCEPT SUSQUEHANNA RIVER BASIN)

FINFISH RESOURCES[1]

	Pollution Effects (Acres)					Total		Average Annual Loss	
	Negligible	Light	Moderate	Intense	Severe	Acres	Percent	Dollars	Percent
Chesapeake Bay Area	51	4,578	427	17,905	4	22,965	5.3	687,971	37.0
James River Basin	87,047	24,976	19,385	1,541	73	133,022	30.8	768,927	41.3
Rappahannock-York River Basins		593		199		792	0.2	13,549	0.7
Potomac River Basin	243,543	28,796	1,902	174	390	274,805	63.7	390,290	21.0
TOTAL STUDY AREA	330,641	58,943	21,714	19,819	467	431,584	100.0	1,860,737	100.0
Percent	76.6	13.7	5.0	4.6	0.1	100			

	SHELLFISH RESOURCES				FISHERY RESOURCES			
	Closed Areas		Average Annual Loss		Polluted Habitat		Average Annual Loss	
	Acres	Percent	Dollars	Percent	Acres[1]	Percent	Dollars	Percent
Chesapeake Bay Area	26,429	62.5	549,580	50.5	38,254	8.3	1,237,551	42.0
James River Basin	12,571	29.8	361,151	33.1	145,593	31.5	1,130,078	38.3
Rappahannock-York River Basins	3,077	7.3	173,483	15.9	3,869	0.8	187,032	6.3
Potomac River Basin	178	0.4	5,767	0.5	274,805	59.4	396,057	13.4
TOTAL STUDY AREA	42,255	100.0	1,089,981	100.0	462,521	100.0	2,950,718	100.0

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[1] Area not cumulative owing to overlap.

TABLE 24

SUMMARY OF POLLUTED FINFISH HABITAT 1/

CHESAPEAKE BAY & TRIBUTARIES (EXCEPT SUSQUEHANNA RIVER)

		FISH HABITAT CLASSES															
	POLLUTION EFFECT	RESERVOIR R	POND P	TROUT FEEDER 2	TROUT 3	SUCKER 4	BASS FEEDER 5	BASS 6	PICKEREL 7	BULLHEAD 8	CATFISH 9	CARP 10	TIDAL 11	SALT WATER 12	TOTAL	ANNUAL LOSS $	PERCENT POLLUTED
STREAM MILES	NEGLIGIBLE	-	-	-	-	26	45	283	17	-	110	-	57	73	611	0	6.1
	LIGHT	-	-	2	-	68	21	88	13	-	6	2	85	17	302	667,365	3.0
	MODERATE	-	-	6	19	16	32	75	-	22	38	7	62	-	277	478,831	2.7
	INTENSE	-	-	-	1	11	4	64	4	-	-	5	19	11	119	689,808	1.2
	SEVERE	-	-	77	39	8	22	5	3	-	-	-	4	-	158	24,733	1.6
	TOTAL POLLUTED	-	-	85	59	129	124	515	37	22	154	14	227	101	1,467	1,860,737	14.6
TOTAL MILES		-	-	1,131	575	2,455	1,060	1,717	900	26	293	18	993	911	10,079	-	-
% CLASS MILES POLLUTED		-	-	7.5	10.3	5.3	11.7	30.0	4.1	84.6	52.6	77.8	22.9	11.1	14.6	-	-
SURFACE ACRES	NEGLIGIBLE	-	-	-	-	29	94	16,392	51	-	12,744	-	74,167	227,164	330,641	0	10.4
	LIGHT	-	-	4	-	156	131	2,464	38	-	127	7	45,739	10,277	58,943	667,365	1.8
	MODERATE	-	-	7	34	81	154	1,961	-	291	686	95	18,405	-	21,714	478,831	0.7
	INTENSE	-	-	-	3	21	20	598	7	-	-	85	1,385	17,700	19,819	689,808	0.6
	SEVERE	-	-	96	129	10	160	45	3	-	-	-	24	-	467	24,733	Neg.
	TOTAL POLLUTED	-	-	107	166	297	559	21,460	99	291	13,557	187	139,720	255,141	431,584	1,860,737	13.5
TOTAL ACRES		29,359	32,324	1,256	1,376	4,540	4,217	33,395	4,393	319	15,297	213	305,776	2,761,686	3,194,151	-	-
% CLASS ACRES POLLUTED		0.0	0.0	8.5	12.1	6.5	13.3	64.3	2.3	91.2	88.6	87.8	45.7	9.2	13.5	-	-

1/ Polluted finfish habitat through December 1966.

TABLE 25

SUMMARY OF POLLUTED FINFISH HABITAT[1/]

CHESAPEAKE BAY AREA

	POLLUTION EFFECT	FISH HABITAT CLASSES													TOTAL	ANNUAL LOSS $	PERCENT POLLUTED
		RESERVOIR R	POND P	TROUT FEEDER 2	TROUT 3	SUCKER 4	BASS FEEDER 5	BASS 6	PICKEREL 7	BULLHEAD 8	CATFISH 9	CARP 10	TIDAL 11	SALT WATER 12			
STREAM MILES	NEGLIGIBLE	-	-	-	-	-	19	6	-	-	-	-	-	-	25	0	1.9
	LIGHT	-	-	-	-	12	6	5	2	-	-	-	14	7	46	53,296	3.4
	MODERATE	-	-	-	-	-	18	6	-	-	21	7	-	-	52	6,613	3.8
	INTENSE	-	-	-	-	-	4	-	-	-	-	5	6	11	26	627,921	1.9
	SEVERE	-	-	-	-	-	-	-	3	-	-	-	1	-	4	141	.3
	TOTAL POLLUTED	-	-	-	-	12	47	17	5	-	21	12	21	18	153	687,971	11.3
TOTAL MILES		-	-	1	-	210	123	49	73	-	21	16	381	483	1,357	-	-
% CLASS MILES POLLUTED		-	-	0.0	-	5.7	38.2	34.7	6.8	-	100	75.0	5.5	3.7	11.3	-	-
SURFACE ACRES	NEGLIGIBLE	-	-	-	-	-	34	17	-	-	-	-	-	-	51	0	Neg.
	LIGHT	-	-	-	-	12	18	22	3	-	-	-	226	4,297	4,578	53,296	0.2
	MODERATE	-	-	-	-	-	105	26	-	-	201	95	-	-	427	6,613	Neg.
	INTENSE	-	-	-	-	-	20	-	-	-	-	85	100	17,700	17,905	627,921	0.7
	SEVERE	-	-	-	-	-	-	-	3	-	-	-	1	-	4	141	Neg.
	TOTAL POLLUTED	-	-	-	-	12	177	65	6	-	201	180	327	21,997	22,965	687,971	0.9
TOTAL ACRES		10,319	5,375	1	-	364	508	229	327	-	201	206	118,754	2,328,302	2,464,086	-	-
% CLASS ACRES POLLUTED		0.0	0.0	0.0	-	3.3	34.8	28.4	1.8	-	100	87.4	0.3	0.9	0.9	-	-

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[1/] Polluted finfish habitat through December 1966.

TABLE 26

SUMMARY OF POLLUTED FINFISH HABITAT 1/

JAMES RIVER BASIN

		FISH HABITAT CLASSES														
	POLLUTION EFFECT	RESERVOIR R	POND P	TROUT FEEDER 2	TROUT 3	SUCKER 4	BASS FEEDER 5	BASS 6	PICKEREL 7	BULLHEAD 8	CATFISH 9	CARP 10	TIDAL 11	SALT WATER 12	TOTAL	ANNUAL LOSS $	PERCENT POLLUTED
STREAM MILES	NEGLIGIBLE	-	-	-	-	-	-	163	-	-	-	-	15	23	201	0	7.7
	LIGHT	-	-	-	-	15	-	79	-	-	-	-	16	-	110	279,905	4.2
	MODERATE	-	-	-	-	-	-	38	-	-	2	-	55	-	95	436,275	3.6
	INTENSE	-	-	-	-	11	-	39	4	-	-	-	8	-	62	49,897	2.4
	SEVERE	-	-	-	-	6	-	5	-	-	-	-	3	-	14	2,850	.5
	TOTAL POLLUTED	-	-	-	-	32	-	324	4	-	2	-	97	23	482	768,927	18.4
TOTAL MILES		-	-	220	236	735	138	782	139	-	80	-	226	70	2,626	-	-
% CLASS MILES POLLUTED		-	-	-	-	4.4	-	41.4	2.9	-	2.5	-	42.9	32.9	18.4	-	-
SURFACE ACRES	NEGLIGIBLE	-	-	-	-	-	-	11,140	-	-	-	-	15,754	60,153	87,047	0	48.8
	LIGHT	-	-	-	-	30	-	2,414	-	-	-	-	22,532	-	24,976	279,905	14.0
	MODERATE	-	-	-	-	-	-	1,450	-	-	90	-	17,845	-	19,385	436,275	10.9
	INTENSE	-	-	-	-	21	-	427	7	-	-	-	1,086	-	1,541	49,897	0.9
	SEVERE	-	-	-	-	5	-	45	-	-	-	-	23	-	73	2,850	Neg.
	TOTAL POLLUTED	-	-	-	-	56	-	15,476	7	-	90	-	57,240	60,153	133,022	768,927	74.6
TOTAL ACRES		7,094	10,714	207	635	1,154	276	18,293	1,907	-	1,013	-	64,340	72,588	178,221	-	-
% CLASS ACRES POLLUTED		0.0	0.0	0.0	0.0	4.9	0.0	84.6	0.4	-	8.9	-	89.0	82.9	74.6	-	-

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1/ Polluted finfish habitat through December 1966.

TABLE 27

SUMMARY OF POLLUTED FINFISH HABITAT 1/

RAPPAHANNOCK-YORK RIVER BASINS

		FISH HABITAT CLASSES															
	POLLUTION EFFECT	RESERVOIR R	POND P	TROUT FEEDER 2	TROUT 3	SUCKER 4	BASS FEEDER 5	BASS 6	PICKEREL 7	BULLHEAD 8	CATFISH 9	CARP 10	TIDAL 11	SALT WATER 12	TOTAL	ANNUAL LOSS $	PERCENT POLLUTED
STREAM MILES	NEGLIGIBLE	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	Neg.
	LIGHT	-	-	-	-	-	-	-	-	-	-	-	10	-	10	6,746	0.5
	MODERATE	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	Neg.
	INTENSE	-	-	-	-	-	-	-	-	-	-	-	5	-	5	6,803	0.3
	SEVERE	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	Neg.
	TOTAL POLLUTED	-	-		-	-	-	-	-	-	-	-	15	-	15	13,549	0.8
TOTAL MILES		-	-	14	70	452	204	122	603	-	41	-	193	201	1,900	-	-
% CLASS MILES POLLUTED		-	-	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	-	7.7	0.0	0.8	-	-
SURFACE ACRES	NEGLIGIBLE	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	Neg.
	LIGHT	-	-	-	-	-	-	-	-	-	-	-	593	-	593	6,746	0.3
	MODERATE	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	Neg.
	INTENSE	-	-	-	-	-	-	-	-	-	-	-	199	-	199	6,803	0.1
	SEVERE	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	Neg.
	TOTAL POLLUTED	-	-	-	-		-	-	-	-	-	-	792	-	792	13,549	0.4
TOTAL ACRES		2,946	7,202	12	102	630	723	1,540	4,838	-	385	-	24,452	149,128	189,259	-	-
% CLASS ACRES POLLUTED		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	-	3.2	0.0	0.4	-	-

1/ Polluted finfish habitat through December 1966.

TABLE 28

SUMMARY OF POLLUTED FINFISH HABITAT 1/

POTOMAC RIVER BASIN

	POLLUTION EFFECT	FISH HABITAT CLASSES													TOTAL	ANNUAL LOSS $	PERCENT POLLUTED
		RESERVOIR R	POND P	TROUT FEEDER 2	TROUT 3	SUCKER 4	BASS FEEDER 5	BASS 6	PICKEREL 7	BULLHEAD 8	CATFISH 9	CARP 10	TIDAL 11	SALT WATER 12			
STREAM MILES	NEGLIGIBLE	-	-	-	-	26	26	114	17	-	110	-	42	50	385	0	9.2
	LIGHT	-	-	2	-	41	15	4	11	-	6	2	45	10	136	327,418	3.2
	MODERATE	-	-	6	19	16	14	31	-	22	15	-	7	-	130	35,943	3.1
	INTENSE	-	-	-	1	-	-	25	-	-	-	-	-	-	26	5,187	0.6
	SEVERE	-	-	77	39	2	22	-	-	-	-	-	-	-	140	21,742	3.3
	TOTAL POLLUTED	-	-	85	59	85	77	174	28	22	131	2	94	60	817	390,290	19.4
	TOTAL MILES	-	-	896	269	1,058	595	764	85	26	151	2	193	157	4,196	-	-
	% CLASS MILES POLLUTED	-	-	9.5	21.9	8.0	12.9	22.8	32.9	84.6	86.8	100	48.7	38.2	19.5	-	-
SURFACE ACRES	NEGLIGIBLE	-	-	-	-	29	60	5,235	51	-	12,744	-	58,413	167,011	243,543	0	67.2
	LIGHT	-	-	4	-	114	113	28	35	-	127	7	22,388	5,980	28,796	327,418	8.0
	MODERATE	-	-	7	34	81	49	485	-	291	395	-	560	-	1,902	35,943	0.5
	INTENSE	-	-	-	3	-	-	171	-	-	-	-	-	-	174	5,187	Neg.
	SEVERE	-	-	96	129	5	160	-	-	-	-	-	-	-	390	21,742	0.1
	TOTAL POLLUTED	-	-	107	166	229	382	5,919	86	291	13,266	7	81,361	172,991	274,805	390,290	75.8
	TOTAL ACRES	9,000	9,033	1,037	639	2,392	2,710	13,031	321	319	13,698	7	98,730	211,668	362,585	-	-
	% CLASS ACRES POLLUTED	0.0	0.0	10.3	26.0	9.6	14.1	45.4	26.8	91.2	96.8	100	82.4	81.7	75.8	-	-

1/ Polluted finfish habitat through December 1966.

TABLE 29

POLLUTED FINFISH HABITAT 1/

CHESAPEAKE BAY AREA

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT		DATA 2/ SOURCE	POLLUTION		FISH KILLS	POLLUTION EFFECT ON FISH POPULATION AND/OR USE	TOTAL AV. ANN. SUSTAINED HARVEST CAPABILITY (LBS)		ANNUAL LOSS $
			RIVER MILES	SURFACE ACRES		TYPE	MAJOR POLLUTANT			W/EXISTING POLLUTION	WITHOUT POLLUTION	
Patuxent River	02-13-047	11	45.0-56.9	180.0	1,9,11,13	I,M	Sewage	No	Light	9,450	12,600	2,048
Patuxent River	02-13-047	9	56.9-77.6	201.0	1,9,10,11,13	I,M	Sewage	No	Moderate	5,025	10,050	3,518
Little Patuxent River	2-001240	5	0.0-17.6	105.4	1,9,10,11,13	I,M	Sewage	No	Moderate	1,160	2,319	1,159
Severn Run	02-13-155	11	12.0-13.0	30.0	1,6,13,14,15	I	Chemical	Yes	Light	1,575	2,100	342
Severn Run	02-13-155	7	13.0-14.5	2.9	1,6,13,14,15	I	Chemical	Yes	Light	83	110	27
Severn Run	02-13-155	4	14.5-19.5	5.0	1,6,13,14,15	I	Chemical	Yes	Light	56	75	11
Patapsco River	02-13-223	12	0.0-11.0	17,700.0	1,13,14	I,M	Chemical	No Data	Intense	553,125	2,212,500	622,266
Patapsco River	02-13-223	11	11.0-17.3	100.0	1,13,16,17	I,M	Chemical	No Data	Intense	1,750	7,000	3,413
Patapsco River	02-13-223	10	17.3-22.3	85.0	1,13,16,17	I,M	Chemical	No Data	Intense	1,063	4,250	1,912
Patapsco River	02-13-223	10	22.3-29.3	95.0	1,13,16,17	I,M	Chemical	No Data	Moderate	2,375	4,750	1,425
North Branch Patapsco River	02-13-223	5	56.4-62.2	18.3	1	M	Sewage	Yes	Light	302	403	101
South Branch Patapsco River	2-000470	6	0.0- 5.5	17.3	1,16,17	M	Sewage	Yes	Negligible	519	519	0
South Branch Patapsco River	2-000470	5	5.5-11.4	11.4	1,16,17	M	Sewage	No Data	Negligible	251	251	0

1/ Polluted finfish habitat through December 1966.
2/ See table 13.

Table 29, page 2

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT		DATA SOURCE	POLLUTION		FISH KILLS	POLLUTION EFFECT ON FISH POPULATION AND/OR USE	TOTAL AV. ANN. SUSTAINED HARVEST CAPABILITY (LBS)		ANNUAL LOSS $
			RIVER MILES	SURFACE ACRES		TYPE	MAJOR POLLUTANT			W/EXISTING POLLUTION	WITHOUT POLLUTION	
Back River	02-13-227	12	0.0- 7.2	4,297.0	1,21,22	M	Sewage	No Data	Light	402,844	537,125	50,355
Little Gunpowder Falls	2-000140	11	1.5- 2.5	16.0	1,13,17,18	I,M	Chemical	Yes	Light	840	1,120	182
Little Gunpowder Falls	2-000140	6	2.5- 7.5	22.0	1,13,17,18	I,M	Chemical	Yes	Light	495	660	215
Little Falls	2-000600	5	0.0- 7.1	22.4	1	I	Chemical	No	Negligible	493	493	0
Bynum Run	2-00090	4	1.0- 7.6	6.4	1,13	M	Sewage	No	Light	72	96	14
James Run	3-00020	4	0.0- 0.5	0.5	1	I	Silt	No	Light	6	8	1
Little Northeast Creek	02-13-268	6	1.6- 3.5	7.0	1	I	Silt	No Data	Moderate	105	210	137
Little Elk Creek	2-000250	6	1.6- 6.0	19.2	1,20	I	Chemical	No Data	Moderate	288	576	374
Little Elk Creek	2-000250	5	6.0-10.0	20.0	1,20	I	Chemical	Yes	Intense	110	440	330
Moores Mill Creek	3-00170	11	0.0- 0.6	0.6	1	I	Chicken	No Data	Severe	0	42	27
Nassawango Creek	2-000630	7	8.5-11.5	3.0	1	I	Chicken	No Data	Severe	0	114	114

TABLE 30

POLLUTED FINFISH HABITAT 1/

JAMES RIVER BASIN

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT		DATA 2/ SOURCE	POLLUTION		FISH KILLS	POLLUTION EFFECT ON FISH POPULATION AND/OR USE	TOTAL AV. ANN. SUSTAINED HARVEST CAPABILITY (LBS)		ANNUAL LOSS $
			RIVER MILES	SURFACE ACRES		TYPE	MAJOR POLLUTANT			W/EXISTING POLLUTION	WITHOUT POLLUTION	
James River	02-16-007	12	0.0- 23.0	60,153.0	1	I,M	Sewage	Yes	Negligible	7,519,125	7,519,125	0
James River	02-16-007	11	23.0- 38.5	22,532.0	1,6	I,M	Sewage	Yes	Light	1,182,930	1,577,240	256,302
James River	02-16-007	11	38.5- 53.3	15,754.0	1	I,M		Yes	Negligible	1,102,780	1,102,780	0
James River	02-16-007	11	53.3- 97.2	16,283.0	1,5,6	I,M	Sewage	Yes	Moderate	569,905	1,139,810	370,439
James River	02-16-007	11	97.2-105.2	1,086.0	1,5,6,7,8	I,M	Sewage	Yes	Intense	19,005	76,020	37,060
James River	02-16-007	6	105.2-208.0	8,180.0	1	M	-	No Data	Negligible	245,400	245,400	0
James River	02-16-007	6	208.0-214.0	335.0	1,6	I	Acid	Yes	Light	8,438	11,250	3,656
James River	02-16-007	6	214.0-230.0	1,000.0	1	M	-	No Data	Negligible	30,000	30,000	0
James River	02-16-007	6	230.0-254.0	1,500.0	1,4,5,6,8	I,M	Chemical	Yes	Light	33,750	45,000	14,625
James River	02-16-007	6	254.0-266.0	750.0	1	I	-	No Data	Negligible	22,500	22,500	0
James River	02-16-007	6	266.0-270.0	150.0	1,8	I	Paper	No Data	Light	3,375	4,500	1,463
James River	02-16-007	6	270.0-301.7	1,210.0	1	I	Paper	No Data	Negligible	36,300	36,300	0
James River	02-16-007	6	301.7-339.7	1,450.0	1,4,5	I	Paper	Yes	Moderate	21,750	43,500	28,275
Jackson River	02-16-007	6	339.7-363.6	290.0	1,2,3,4,5,8	I,M	Paper	Yes	Intense	2,175	8,700	8,483
White Oak Swamp	3-00830	7	6.3- 7.3	1.0	1	M	Sewage	Yes	Intense	10	38	28
Upham Brook	3-01410	7	0.0- 3.0	6.2	1	M	Sewage	Yes	Intense	59	236	177

1/ Polluted finfish habitat through December 1966.
2/ See table 33.

Table 30, page 2

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT		DATA SOURCE	POLLUTION		FISH KILLS	POLLUTION EFFECT ON FISH POPULATION AND/OR USE	TOTAL AV. ANN. SUSTAINED HARVEST CAPABILITY (LBS)		ANNUAL LOSS $
			RIVER MILES	SURFACE ACRES		TYPE	MAJOR POLLUTANT			W/EXISTING POLLUTION	WITHOUT POLLUTION	
Bailey Creek	2-000690	11	0.0- 3.4	23.0	1,2,5,7	I	Chemical	No Data	Severe	0	1,610	1,047
Appomattox River	2-000710	11	0.0- 10.7	1,562.0	1	I,M	Chemical	No	Moderate	54,670	109,340	35,536
Appomattox River	2-000710	9	10.7- 12.2	90.0	1	I,M	Sewage	No	Moderate	2,250	4,500	2,025
Rivannah River	2-001400	6	32.3-36.3	39.0	1	I,M	Sewage	No	Light	878	1,170	380
Moores Creek	3-00650	4	0.0- 5.5	5.3	1,2	M	Sewage	No Data	Severe	0	80	48
North Fork Rivannah River	3-00720	6	0.0- 2.4	8.0	1	I	Silt	No	Light	180	240	78
Mechum River	3-00870	4	0.0- 9.6	18.6	1,8	I	Food	Yes	Intense	70	279	125
Hardware River	2-001540	4	11.9-27.3	30.0	1	I	Silt	No	Light	338	450	67
Tye River	2-001900	6	0.0-15.1	137.0	1,7,8	I	Acid	Yes	Intense	1,028	4,110	4,007
Piney River	3-00350	6	0.0- 5.0	45.0	1,2,5,7,8	I	Acid	No Data	Severe	0	1,350	1,755
Fishing Creek	2-002230	4	0.0- 1.2	2.5	1	I	Meat	No Data	Intense	10	38	17
Maury River	2-002560	6	0.0-12.5	152.0	1,2	I	Sewage	Yes	Light	3,420	4,560	1,482
Maury River	2-002560	6	20.4-41.9	175.0	1	I	Silt	No	Light	3,938	5,250	1,706
Calfpasture River	2-002560	6	41.9-46.5	15.0	1	I	Silt	No	Light	338	450	146

TABLE 31

POLLUTED FINFISH HABITAT [1]

RAPPAHANNOCK-YORK RIVER BASINS

WATER AREA	SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT		DATA [2] SOURCE	POLLUTION		FISH KILLS	POLLUTION EFFECT ON FISH POPULATION AND/OR USE	TOTAL AV. ANN. SUSTAINED HARVEST CAPABILITY (LBS)		ANNUAL LOSS $
			RIVER MILES	SURFACE ACRES		TYPE	MAJOR POLLUTANT			W/EXISTING POLLUTION	WITHOUT POLLUTION	
Rappahannock River	0215046	11	94.0-99.0	326.4	1,23	I,M	Sewage	No	Light	17,136	22,848	3,713
Rappahannock River	0215046	11	99.0-104.0	266.6	1,23	I,M	Sewage	No	Light	13,997	18,662	3,033
Rappahannock River	0215046	11	104.0-109.0	199.3	1,23	I,M	Sewage	No Data	Intense	3,488	13,951	6,803

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[1] Polluted finfish habitat through December 1966.
[2] See table 33.

TABLE 32

POLLUTED FINFISH HABITAT 1/

POTOMAC RIVER BASIN

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT		DATA 2/ SOURCE	POLLUTION		FISH KILLS	POLLUTION EFFECT ON FISH POPULATION AND/OR USE	TOTAL AV. ANN. SUSTAINED HARVEST CAPABILITY (LBS)		ANNUAL LOSS $
			RIVER MILES	SURFACE ACRES		TYPE	MAJOR POLLUTANT			W/EXISTING POLLUTION	WITHOUT POLLUTION	
Potomac River	0214001	12	0.0- 49.6	167,011.0	1,32	I,M	Sewage	Yes	Negligible	20,876,375	20,876,375	0
Potomac River	0214001	11	49.6- 82.3	53,743.0	1,32	I,M	Sewage	Yes	Negligible	3,762,010	3,762,010	0
Potomac River	0214001	11	82.3-116.0	20,330.0	1,14,27,28,29	I,M	Sewage	Yes	Light	1,067,325	1,423,100	231,254
Potomac River	0214001	9	116.0-171.4	11,174.0	1,13,27,31,32	I,M	Sewage	No	Negligible	558,700	558,700	0
Potomac River	0214001	6	171.4-285.1	5,235.0	13,31,32	I,M	Sewage	No Data	Negligible	157,050	157,050	0
North Branch Potomac River	0214001	8	285.1-307.1	291.0	13,31,32	I,M	Sewage	No Data	Moderate	6,402	12,804	4,481
North Branch Potomac River	0214001	6	307.1-338.5	485.0	13,31,32	I,M	Sewage	No Data	Moderate	7,275	14,550	9,458
North Branch Potomac River	0214001	5	338.5-360.5	160.0	13,31,32	I,M	Acid	No	Severe	0	3,520	3,520
North Branch Potomac River	0214001	3	360.5-376.5	77.5	13,31,32	I,M	Acid	No	Severe	0	1,085	10,830
St. Marys River	2-000200	12	0.0- 9.8	5,980.0	13	I,M	Sewage	No	Light	560,625	747,500	70,079
St. Marys River	2-000200	11	9.8- 11.7	3.7	13	I,M	Sewage	No	Negligible	259	259	0
Occoquan Bay	2-000870	11	0.0- 4.8	4,527.0	1,30	M	Sewage	No	Negligible	316,890	316,890	0
Occoquan Creek	2-000870	11	4.8- 6.9	101.7	1,30	M	Sewage	No	Negligible	7,119	7,119	0
Bull Run Creek	3-00220	7	4.6- 14.6	38.1	1	M	Sewage	No	Negligible	1,448	1,448	0
Bull Run Creek	3-00220	5	14.6- 18.2	8.7	1	M	Sewage	No	Negligible	191	191	0

Table 32, page 2

Cub Run	4-0120	5	0.0- 6.2	19.8	1	M	Sewage	No	Negligible	436	436	0
Cub Run	4-0120	4	6.2- 7.2	1.9	1	M	Sewage	No	Negligible	29	29	0
Accotink Bay	3-00020	11	0.0- 1.1	275.0	1	M	Sewage	No	Light	14,438	19,250	3,128
Accotink Creek	3-00020	7	1.1-11.8	35.0	1	M	Sewage	No	Light	998	1,330	332
Accotink Creek	3-00020	4	13.0-19.8	7.1	1	M	Sewage	No	Negligible	107	107	0
Piscataway Creek	2-000940	11	0.0- 4.1	836.0	1	M	Sewage	No	Light	43,890	58,520	9,510
Piscataway Creek	2-000940	7	4.1- 9.2	9.9	1	M	Sewage	No	Negligible	376	376	0
Tinkers Creek	3-00070	7	0.0- 1.7	3.3	1	M	Sewage	No	Negligible	125	125	0
Swan Creek	2-000960	11	0.0- 0.9	38.0	1	A	Silt	No	Negligible	2,660	2,660	0
Broad Creek	2-000980	11	0.0- 2.5	350.0	1	M	Sewage	No	Light	18,375	24,500	3,981
Hunting Creek	2-001010	11	0.0- 3.5	597.0	1	I	Silt	No	Light	31,343	41,790	6,790
Holmes Run	2-001010	4	3.5- 8.5	59.0	1	I	Unknown	No Data	Moderate	444	888	266
Holmes Run	2-001010	4	10.5-12.3	4.6	1	I	Silt	No	Negligible	69	69	0
Tripps Creek	3-00220	4	0.0- 1.6	1.9	1	A	Silt	No	Negligible	29	29	0
Anacostia River	2-001040	11	0.0- 6.6	560.0	1,27,28,30	I,M	Sewage	Yes	Moderate	19,600	39,200	12,740
Anacostia River	2-001040	10	6.6- 8.6	6.6	1	M	Sewage	No Data	Light	248	330	49
Rock Creek	2-001080	5	0.0-11.3	22.0	1,27,31	M	Sewage	No Data	Negligible	484	484	0
Rock Creek	2-001080	4	11.3-25.6	13.5	1,31	M	Sewage	No	Negligible	203	203	0
Pemmit Run	2-001190	4	0.0- 1.6	1.6	1	M	Sewage	No	Moderate	12	24	7
Cabin John Creek	2-001260	5	0.0- 5.0	9.7	1	M	Sewage	No	Negligible	213	213	0
Monocacy River	2-001760	9	0.0-10.0	210.0	31,32	M	Sewage	No	Negligible	10,500	10,500	0
Monocacy River	2-001760	9	10.0-15.0	100.0	31,32	M	Sewage	No	Light	3,750	5,000	875

1/ Polluted finfish habitat through December 1966.
2/ See table 33.

Table 32, page 3

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT RIVER MILES	STREAM SEGMENT SURFACE ACRES	DATA SOURCE	POLLUTION TYPE	POLLUTION MAJOR POLLUTANT	FISH KILLS	POLLUTION EFFECT ON FISH POPULATION AND/OR USE	TOTAL AV. ANN. SUSTAINED HARVEST CAPABILITY (LBS) W/EXISTING POLLUTION	TOTAL AV. ANN. SUSTAINED HARVEST CAPABILITY (LBS) WITHOUT POLLUTION	ANNUAL LOSS $
Monocacy River	2-001760	9	15.0- 20.0	100.0	31,32	M	Sewage	No	Moderate	2,500	5,000	1,750
Rock Creek	2-001760	4	53.0- 63.0	22.0	31,32	M	Sewage	No	Light	248	330	49
Shenandoah River	2-001930	9	0.0- 45.0	1,360.0	31	I,M	Sewage	No	Negligible	68,000	68,000	0
Shenandoah River	2-001930	9	45.0- 55.0	294.7	31,32	I,M	Zinc	No Data	Moderate	7,368	14,735	5,157
North River	2-001930	5	166.7-168.7	2.6	32	M	Sewage	No	Light	43	57	14
Mill Creek	4-0400	4	0.0- 1.5	4.5	32	M	Sewage	No	Light	51	68	10
Hawksbill Creek	3-01030	4	0.0- 4.5	9.0	32	M	Sewage	No	Light	101	135	20
South River	3-01830	6	0.0- 24.5	171.0	1,31,32	I,M	Chemical	No Data	Intense	1,283	5,130	5,001
South River	3-01830	4	39.5- 40.5	2.0	32	I	Chicken	No	Light	23	30	4
Lewis Creek	4-0170	4	0.0- 4.0	9.7	32	M	Sewage	No	Moderate	73	146	44
Cooks Creek	3-02020	4	0.0- 2.0	4.8	32	M	Sewage	No	Light	54	72	11
Antietam Creek	2-001980	5	15.0- 20.0	24.0	1,13,31,32	M	Sewage	No	Moderate	264	528	264
Marsh Run	3-00190	4	0.0- 3.0	7.3	32	I	Chemical	No Data	Light	82	110	17
Opequon Creek	2-002090	5	0.0- 9.0	25.0	31,32	I,M	Sewage	No	Moderate	275	550	275
Opequon Creek	2-002090	5	36.0- 39.5	56.0	31,32	M	Sewage	No	Light	924	1,232	308
Opequon Creek	2-002090	4	39.5- 45.0	14.0	32	M	Sewage	No	Light	158	210	31
Tuscarora Creek	3-00140	4	0.0- 3.0	5.5	32	I	Chemical	No Data	Moderate	41	83	25
Abrams Creek	3-00580	4	0.0- 2.0	4.8	32	M	Sewage	No Data	Moderate	36	72	22
Conococheague Ck.	2-002140	9	0.0- 1.0	27.0	31,32	I	Chemical	No Data	Light	1,013	1,350	236
East Branch Conococheague Ck.	3-00180	5	0.0- 4.5	24.5	32	I,M	Unknown	No	Light	404	539	135
East Branch Conococheague Ck.	3-00180	4	4.5- 13.0	36.0	32	I,M	Unknown	No	Light	405	540	81

Table 32, page 4

East Branch Conococheague Ck.	3-00180	3	13.0- 23.0	18.0	32	I,M	Unknown	No Data	Moderate	126	252	756
Back Creek	2-002210	4	39.0- 43.0	12.0	32	I	Acid Mine	No	Light	135	180	27
Back Creek	2-002210	2	43.0- 45.0	4.0	32	I	Acid Mine	No	Light	24	32	32
Tonoloway Creek	2-002320	5	0.0- 4.5	30.2	32	I	Silt	No	Light	498	664	166
Little Tonoloway Creek	3-00050	4	0.0- 1.0	2.5	32	I	Silt	No	Light	28	38	6
Wills Creek	2-002760	6	0.0- 4.0	28.0	13,31,32	I,M	Acid Mine	No	Light	630	840	273
Braddock Run	3-00030	3	0.0- 4.0	7.3	1,13,31,32	I	Acid Mine	No Data	Moderate	51	102	204
Braddock Run	3-00030	2	4.0- 8.0	5.0	1,13,31,32	I	Acid Mine	No Data	Moderate	20	40	80
Jennings Run	3-00050	3	0.0- 5.0	9.0	1,13,31,32	I	Acid Mine	No Data	Moderate	63	126	378
Jennings Run	3-00050	2	5.0- 9.0	4.8	1,13,31,32	I	Acid Mine	No	Severe	0	38	152
Dutch Hollow	4-0160	2	0.0- 1.5	1.0	32	I	Acid Mine	No	Severe	0	8	32
Warrior Run	2-002860	2	0.0- 2.0	2.5	32	I	Acid Mine	No	Severe	0	20	80
Georges Creek	2-003060	3	0.0- 8.0	14.5	13,32	I	Acid Mine	No	Severe	0	203	1,218
Georges Creek	2-003060	2	8.0- 12.0	4.8	13,32	I	Acid Mine	No	Severe	0	38	152
Mill Run	3-00050	2	0.0- 4.5	5.5	32	I	Acid Mine	No	Severe	0	44	176
Laurel Run	3-00090	2	0.0- 2.0	2.4	32	I	Acid Mine	No Data	Moderate	10	19	36
Koontz Run	3-00130	2	0.0- 2.0	2.4	32	I	Acid Mine	No	Severe	0	19	76
Savage River	2-003080	3	0.0- 1.0	3.0	1,13,32	I	Acid Mine	No Data	Intense	11	42	186
Aaron Run	3-00020	2	0.0- 3.0	3.6	1,13,32	I	Acid Mine	No	Severe	0	29	116
Pine Swamp Run	2-003090	2	0.0- 4.5	4.0	1	I	Acid Mine	No	Severe	0	32	128
Elklick Run	2-003140	2	0.0- 4.0	4.8	1,32	I	Acid Mine	No	Severe	0	38	152
Deep Run	2-003170	2	0.0- 5.0	6.7	1,32	I	Acid Mine	No	Severe	0	54	216

Table 32, page 5

WATER AREA	RIVER SYSTEM INDEX CODE	FISH HABITAT CLASS	STREAM SEGMENT		DATA SOURCE	POLLUTION		FISH KILLS	POLLUTION EFFECT ON FISH POPULATION AND/OR USE	TOTAL AV. ANN. SUSTAINED HARVEST CAPABILITY (LBS)		ANNUAL LOSS $
			RIVER MILES	SURFACE ACRES		TYPE	MAJOR POLLUTANT			W/EXISTING POLLUTION	WITHOUT POLLUTION	
Three Fork Run	2-003180	2	0.0- 4.0	4.8	1	I	Acid Mine	No	Severe	0	38	152
Wolfden Run	2-003200	3	0.0- 1.0	1.8	1	I	Acid Mine	No	Severe	0	25	150
Wolfden Run	2-003200	2	1.0- 6.5	5.5	1	I	Acid Mine	No	Severe	0	44	176
Abram Creek	2-003210	3	0.0- 7.5	24.0	1,32	I	Acid Mine	No	Severe	0	336	2,016
Abram Creek	2-003210	2	7.5-16.0	21.0	1,32	I	Acid Mine	No	Severe	0	168	672
Emory Creek	3-00010	2	0.0- 4.0	4.0	1,32	I	Acid Mine	No	Severe	0	32	128
Lostland Run	2-003240	3	0.0- 1.5	2.7	32	I	Acid Mine	No	Severe	0	38	227
North Prong	2-003240	2	1.5- 4.0	3.0	32	I	Acid Mine	No	Severe	0	24	96
South Prong	3-00010	2	0.0- 2.5	3.0	32	I	Acid Mine	No	Severe	0	24	96
Laurel Run	2-003280	3	0.0- 2.0	3.6	32	I	Acid Mine	No	Severe	0	50	302
Trout Run	3-00020	2	0.0- 3.0	3.6	32	I	Acid Mine	No	Severe	0	29	115
Buffalo Creek	2-003370	2	0.0- 1.0	1.0	1,32	I	Acid Mine	No	Severe	0	8	32
Little Buffalo Creek	2-003370	2	1.0- 4.0	1.8	1	I	Acid Mine	No	Severe	0	14	58
Buffalo Creek	3-00020	2	0.0- 3.5	3.2	32	I	Acid Mine	No	Severe	0	26	102
Laurel Run	2-003420	4	0.0- 2.0	4.8	1,32	I	Acid Mine	No	Severe	0	72	43
Laurel Run	2-003420	3	2.0- 4.5	4.5	1,32	I	Acid Mine	No	Severe	0	63	378
Laurel Run	2-003420	2	4.5- 6.5	2.4	1,32	I	Acid Mine	No	Severe	0	19	77
Elk Run	2-003450	2	0.0- 2.5	2.3	1	I	Acid Mine	No	Severe	0	18	74

TABLE 33

POLLUTED FINFISH HABITAT DATA SOURCES

1. Expert opinions of State game wardens, State fishery biologists, Federal fish and wildlife biologists, and other authoritative sources.

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7. Industrial waste quality computer print-out. Federal Water Pollution Control Administration, Middle Atlantic Region, 1965.

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20. Thomas C. Hopkins, Jr., "Little Elk Creek Survey, 1966." Maryland Department of Water Resources, 1967.

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22. "Water Pollution Survey, Back River, 1965." Federal Water Pollution Control Administration, Middle Atlantic Region, CB-SRBP Working Document No. 6, 1967.

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24. "Water Resource Study Salem Church Reservoir, Rappahannock River, Virginia." U.S. Department of Health, Education, and Welfare, Public Health Service, Region III, 1964.

25. "Water Quality and Pollution Control Study, Rappahannock River Basin." Federal Water Pollution Control Administration, Middle Atlantic Region, CB-SRBP Working Document No. 10, 1967.

Table 33, page 2

26. "Water Quality and Pollution Control Study, York River Basin." Federal Water Pollution Control Administration, Middle Atlantic Region, CB-SRBP Working Document No. 12, 1967.

27. "Summary of Water Quality, Potomac River Basin in Maryland." Federal Water Pollution Control Administration, Middle Atlantic Region, 1965.

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29. "Continuous Water Pollution Surveillance Operations, Potomac River at Washington, D.C., July 19, 1963-December 31, 1964." U.S. Department of Health, Education, and Welfare, Public Health Service, 1965.

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TABLE 34

POLLUTED SHELLFISH HABITAT 1/

CHESAPEAKE BAY AND TRIBUTARIES (EXCEPT SUSQUEHANNA RIVER BASIN)

	CLOSED SHELLFISH 3/ AREAS (ACRES)			REDUCED HARVEST W/POLLUTION	
WATER AREA 2/	PUBLIC	PRIVATE	TOTAL	POUNDS	$
Chesapeake Bay Area	23,108	3,321	26,429	821,065	549,580
James River Basin	4,500	8,071	12,571	478,783	361,151
Rappahannock-York River Basins	1,030	2,047	3,077	229,390	173,483
Potomac River Basin	178	0	178	8,010	5,767
TOTAL	28,816	13,439	42,255	1,537,248	1,089,981

1/ Pollution through December 1966.
2/ All polluted oyster grounds found in habitat class 12.
3/ Areas closed due to domestic sewage pollution.

TABLE 35

POLLUTED SHELLFISH HABITAT 1/

CHESAPEAKE BAY AREA

WATER AREA 2/	RIVER SYSTEM INDEX CODE		CLOSED SHELLFISH 4/ AREAS (ACRES)		REDUCED HARVEST W/POLLUTION	
	1ST LEVEL	2ND LEVEL	PUBLIC	PRIVATE	POUNDS	$
Cedar Point 3/	02-13-040	-	0	0	-	-
Mill and Back Creeks	02-13-047	2-000040	5	0	125	88
Cuckold and Not Creeks	02-13-047	2-000110	0	70	12,600	7,812
Mill Creek	2-000110	3-000110	0	70	12,600	7,812
Chesapeake Beach	02-13-086		1,200	0	21,000	8,190
Herring Bay	02-13-091		2,300	0	34,500	8,625
West River	02-13		0	60	6,000	4,080
South River	02-13-149		1,384	53	46,790	34,306
Severn River	02-13-155		1,293	0	38,790	28,705
Mill Creek 3/	02-13-166		0	0	-	-
Whitehall Creek	02-13-167		0	5	500	340
Magothy River	02-13-196		121	0	3,630	2,686
Patapsco River	02-13-223		11,140	0	222,800	164,872
Swan Point (Rock Hall Harbor)	02-13-(321-324)		969	26	33,460	12,875
Chester River	02-13-336		108	0	3,240	2,398
Kent Island Narrows	02-13-336		25	0	750	555

Table 35, page 2

Queenstown Creek 3/	2-000060		0	0	-	-
Corsica River	2-000120		10	0	300	222
Warehouse Creek (Eastern Bay)	02-13-		150	15	12,000	8,205
Thompsons Creek (Eastern Bay)	02-13-		74	19	7,080	4,790
Cox's Creek (Eastern Bay)	02-13-		-	77	7,700	4,928
St. Michaels Harbor	02-13-415		65	0	4,550	3,140
Spencer 3/	02-13-415		0	0	-	-
Little Neck 3/	02-13-415		0	0	-	-
Oak Creek	2-000040		300	30	15,000	4,920
Newcombe Creek 3/	02-13-415		0	0	-	-
Choptank River	02-13-451		3,500	0	102,500	6[illegible]50
Blackwalnut Cove	02-13-451		0	0	-	-
San Domingo Creek	2-000030	3-00040	0	27	2,700	1,944
Town Creek	2-000050		4	2	340	245
Trent Avon	2-000050	3-00070	139	0	4,865	3,503
La Trappe	2-000110		58	0	2,030	1,462
Back Creek (Honga River) 3/	02-13-		0	0	-	-
Nanticoke River	02-13-570		81	88	16,970	12,049
Wicomico River	2-000020		0	3	300	222
Manokin River	02-13-587	2-0000-(80-90)	0	449	44,900	30,532
Big Annemessex River 3/	02-13-590		0	0	-	-
Pocomoke River and Sound	02-13-672		123	958	97,645	73,234

1/ Pollution through December 1966.
2/ All polluted oyster grounds found in habitat class 12.
3/ Polluted areas capable of oyster production but not under public or private lease.
4/ Areas closed due to domestic sewage pollution.

Table 35, page 3

WATER AREA	RIVER SYSTEM INDEX CODE		CLOSED SHELLFISH AREAS (ACRES)		REDUCED HARVEST W/POLLUTION	
	1ST LEVEL	2ND LEVEL	PUBLIC	PRIVATE	POUNDS	$
Back River (N.W. Br.)	02-15-002		0	200	9,000	6,930
Back River (S.W. Br.)	2-000030		0	200	9,000	6,930
Put-In-Creek	02-15-026	2-000040	0	39	1,755	1,351
Horn Harbor	02-15-035		0	35	1,575	1,212
Dymers Creek	02-15-050		0	30	1,350	1,040
Dividing Creek	02-15-054	2-0000-(70-90)	0	15	675	520
Cockrell Creek	02-15-063		13	0	65	50
Ononcock Creek	02-15-120		0	160	7,200	5,544
Occohannock Creek	02-15-141		0	50	2,250	1,732
Cape Charles City	02-15-		0	50	2,250	1,732
Oyster Creek 3/	02-15-198		0	0	-	-
Parting Creek	02-15-		46	0	230	170
Chincoteague Bay	02-15-		0	50	5,750	4,312
Little Mosquito Creek 3/	02-15-		0	0	-	-
Scarboro Creek (Girdletree) 3/	02-15-680		0	0	-	-
Sinepurent Bay (Ocean City) 3/	02-15-719		0	0	-	-
Lynnhaven Bay 3/	02-16-001		0	0	-	-
Eastern Branch	02-16-001		0	150	6,750	5,198
Long Creek	2-000010		0	87	3,915	3,014
Linkhorn Bay	2-000010		0	143	6,435	4,955
Pleasure House Creek	2-000020		0	10	450	202
Western Branch	2=000040		0	150	6,750	5,198
Little Creek 3/	02-16-003		0	0	-	-
TOTAL			23,108	3,321	821,065	549,580

TABLE 36

POLLUTED SHELLFISH HABITAT 1/

JAMES RIVER BASIN

WATER AREA 2/	RIVER SYSTEM INDEX CODE		CLOSED SHELLFISH 4/ AREAS (ACRES)		REDUCED HARVEST W/POLLUTION	
	1ST LEVEL	2ND LEVEL	PUBLIC	PRIVATE	POUNDS	$
Willoughby Bay	02-16-004		0	142	6,390	4,920
Lafayette River	02-16-005		110	663	30,385	23,390
Elizabeth River	02-16-006		1,860	923	50,835	39,050
James River (Newport News)	02-16-007		320	600	49,800	38,106
James River (Newport News)	02-16-007		360	0	5,400	3,888
James River - Hampton Roads	02-16-007		1,850	3,713	201,333	148,125
Hoffler Creek 3/	2-000090		0	0	-	-
Streeter Creek 3/	2-000110		0	0	-	-
Nansemond River (Pig Pt.) 3/	2-000130		0	0	-	-
Nansemond River	2-000130		0	500	37,500	28,875
Pagan River	2-000170		0	400	30,000	23,100
Bennett Creek	2-000170		0	230	17,250	13,283
Warwick River	2-000180		0	300	22,500	17,325
Deep Creek	2-000180		0	13	975	750
Hampton Creek	02-16-011		0	82	3,690	2,841
Mill Creek	02-16-012		0	505	22,725	17,498
TOTAL			4,500	8,071	478,783	361,151

1/ Pollution through December 1966.
2/ All polluted oyster grounds found in habitat class 12.
3/ Polluted areas capable of oyster production but not under public or private lease.
4/ Areas closed due to domestic sewage pollution.

TABLE 37

POLLUTED SHELLFISH HABITAT 1/

RAPPAHANNOCK-YORK RIVER BASINS

WATER AREA 2/	RIVER SYSTEM INDEX CODE 1ST LEVEL	RIVER SYSTEM INDEX CODE 2ND LEVEL	CLOSED SHELLFISH 4/ AREAS (ACRES) PUBLIC	CLOSED SHELLFISH 4/ AREAS (ACRES) PRIVATE	REDUCED HARVEST W/POLLUTION POUNDS	REDUCED HARVEST W/POLLUTION $
York River (Wormley Pt.)	02-15-018		0	0	-	-
York River (Gloucester Pt.)	02-15-018		0	10	700	518
York River (Cheatham Annex)	02-15-018		370	200	20,750	14,575
York River (Stoney Pt.)	02-15-018		360	230	22,600	15,934
York River (below West Pt.)	02-15-018		0	900	63,000	46,620
Sarah Creek	2-000080		0	127	8,890	6,578
Timberneck Creek	2-000200		0	79	5,530	4,092
Queens Creek 3/	2-000270		0	0	-	-
Rappahannock River (Windmill Pt.) 3/	02-15-046		0	0	-	-
Rappahannock River (Burhans Wharf)	02-15-046		300	340	72,500	57,185
Broad Creek	2-000010		0	12	2,640	2,085
Carter Creek	2-000120	3-00020	0	30	6,600	5,214
Urbanna Creek	2-000190		0	119	26,180	20,682
TOTAL			1,030	2,047	229,390	173,483

1/ Pollution through December 1966.
2/ All polluted oyster grounds found in habitat class 12.
3/ Polluted areas capable of oyster production but not under public or private lease.
4/ Areas closed due to domestic sewage pollution.

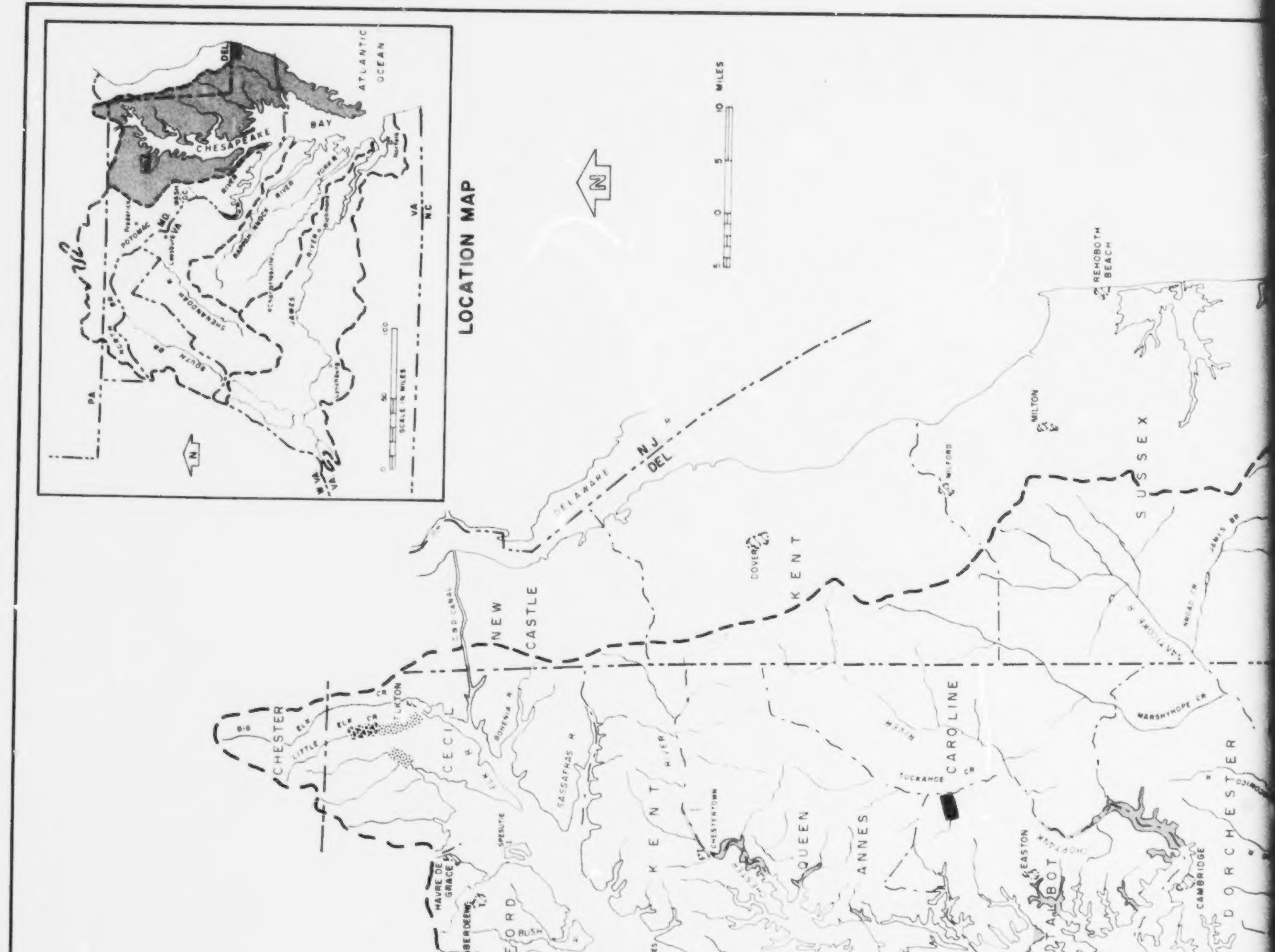
TABLE 38

POLLUTED SHELLFISH HABITAT 1/

POTOMAC RIVER BASIN

WATER AREA 2/	RIVER SYSTEM INDEX CODE		CLOSED SHELLFISH 4/ AREAS (ACRES)		REDUCED HARVEST W/POLLUTION	
	1ST LEVEL	2ND LEVEL	PUBLIC	PRIVATE	POUNDS	$
St. Marys River	2-000200		178	0	8,010	5,767
Yecomico River 3/	2-000230	3-00010	0	0	-	-
Breton Bay 3/	2-000420		0	0	-	-
Neale Sound 3/	2-000460		0	0	-	-
Mattox Creek 3/	2-000490		0	0	-	-
Monroe Creek 3/	2-000510		0	0	-	-
TOTAL			178	0	8,010	5,767

1/ Pollution through December 1966.
2/ All polluted oyster grounds found in habitat class 12.
3/ Polluted areas capable of oyster production but not under public or private lease.
4/ Areas closed due to domestic sewage pollution.


LOCATION MAP
ATLANTIC OCEAN
CHESAPEAKE
BAY
DEL
MD
VA
NC
PA
W.VA
POTOMAC
SHENANDOAH
RAPPAHANNOCK RIVER
YORK R
JAMES
RIVER
SCALE IN MILES
0
50
100
N
0
5
10 MILES
N
PA
MD.
YORK
CARROLL
HOWARD
MONTGOMERY
BALTIMORE
HARFORD
CECIL
ANNE ARUNDEL
PRINCE GEORGES
CHARLES
CALVERT
KENT
QUEEN ANNES
CAROLINE
TALBOT
DORCHESTER
NEW CASTLE
KENT
SUSSEX
CHESAPEAKE
NJ
DEL
DELAWARE R
DOVER
MILFORD
MILTON
REHOBOTH BEACH
CHESTERTOWN
EASTON
CAMBRIDGE
HAVRE DE GRACE
ABERDEEN
BEL AIR
TUCKAHOE CR
CHOPTANK R
MARSHYHOPE CR
ELK R
BIG ELK CR
LITTLE ELK CR
SASSAFRAS R
CHESTER RIVER
BOHEMIA R
GUNPOWDER
LITTLE FALLS
PRETTYBOY RESERVOIR
LOCH RAVEN RESERVOIR
LITTLE GUNPOWDER FALLS
WINTERS RUN
BUSH
MIDDLE RIVER
BACK R
PATAPSCO
PATAPSCO RESERVOIR
WESTERN RUN
LITTLE PATUXENT R
MIDDLE PATUXENT
PATUXENT
RIVER
TRIADELPHIA RESERVOIR
ROCKY GORGE RES
FORT GEORGE MEADE
SEVERN R
SOUTH R
ANNAPOLIS
GLEN BURNIE
SOUTH BR
PINEY RUN
WESTERN BR
SPESUTIE
POOLES I
KENT I
EASTERN BAY
NANTICOKE R
CHES

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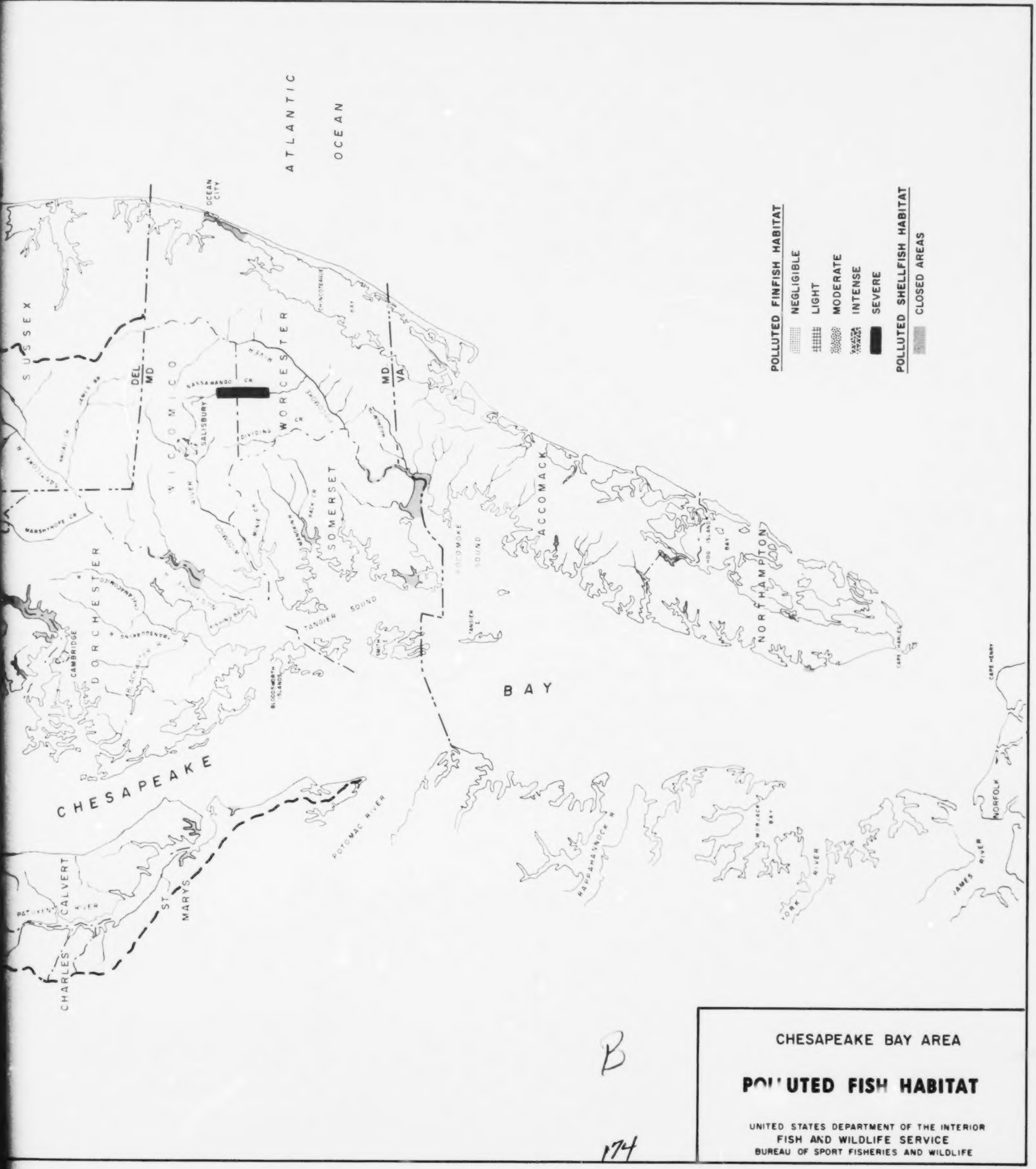
ATLANTIC
OCEAN
OCEAN CITY
SUSSEX
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WICOMICO
SALISBURY
NASSAWANGO CR
DIVIDING CR
WORCESTER
CHINCOTEAGUE BAY
MD
VA
SOMERSET
ACCOMACK
HOG ISLAND BAY
NORTHAMPTON
MARSHYHOPE CR
DORCHESTER
CAMBRIDGE
FISHING BAY
TANGIER SOUND
POCOMOKE SOUND
SMITH I
TANGIER I
BLOODSWORTH ISLANDS
BAY
CAPE CHARLES
CAPE HENRY
CHESAPEAKE
POTOMAC RIVER
RAPPAHANNOCK R
MOBJACK BAY
YORK RIVER
JAMES RIVER
NORFOLK
CALVERT
PATUXENT RIVER
ST MARYS
CHARLES
POLLUTED FINFISH HABITAT
NEGLIGIBLE
LIGHT
MODERATE
INTENSE
SEVERE
POLLUTED SHELLFISH HABITAT
CLOSED AREAS

B

CHESAPEAKE BAY AREA

POLLUTED FISH HABITAT

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

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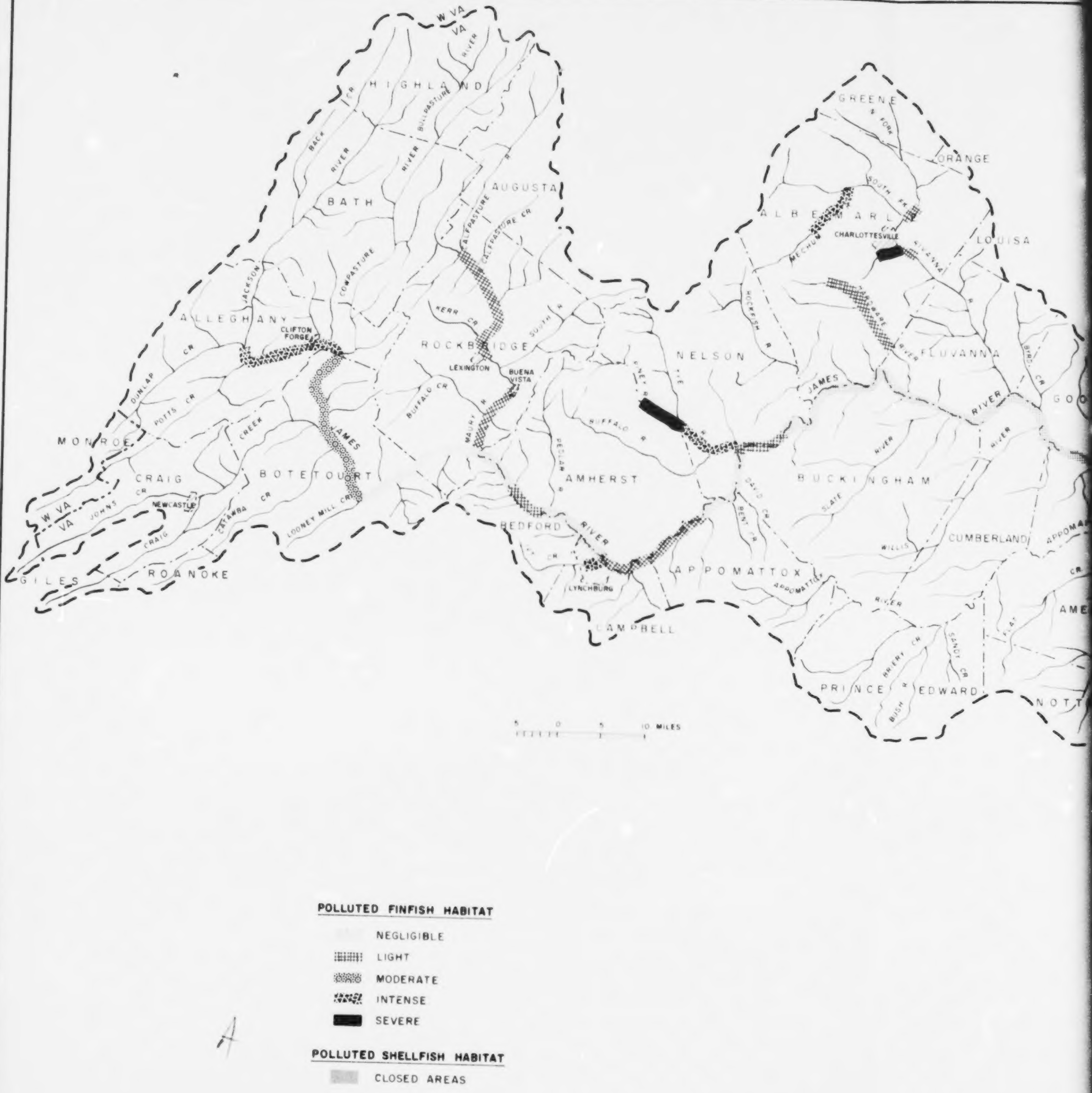
PLATE 13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LEXINGTON
BUENA VISTA
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CRAIG
BOTETOURT
NEWCASTLE
GILES
ROANOKE
BEDFORD
AMHERST
LYNCHBURG
CAMPBELL
APPOMATTOX
NELSON
GREENE
ORANGE
ALBEMARLE
CHARLOTTESVILLE
LOUISA
FLUVANNA
BUCKINGHAM
CUMBERLAND
PRINCE EDWARD
NOTT
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GOO
JAMES
JAMES RIVER
BACK RIVER
BULLPASTURE RIVER
COWPASTURE
JACKSON
CALFPASTURE CR
KERR CR
SOUTH R
MAURY R
BUFFALO CR
POTTS CR
DUNLAP CR
JOHNS CR
CRAIG CR
CATAWBA CR
LOONEY MILL CR
PEDLAR R
BUFFALO R
TYE R
ROCKFISH R
MECHUMS
RIVANNA
HARDWARE RIVER
S FORK
SOUTH FK
DAVID CR
BENT CR
SLATE RIVER
WILLIS
APPOMATTOX
BRIERY CR
SANDY CR
BUSH R
BYRD CR
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POLLUTED FINFISH HABITAT
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POLLUTED SHELLFISH HABITAT
CLOSED AREAS

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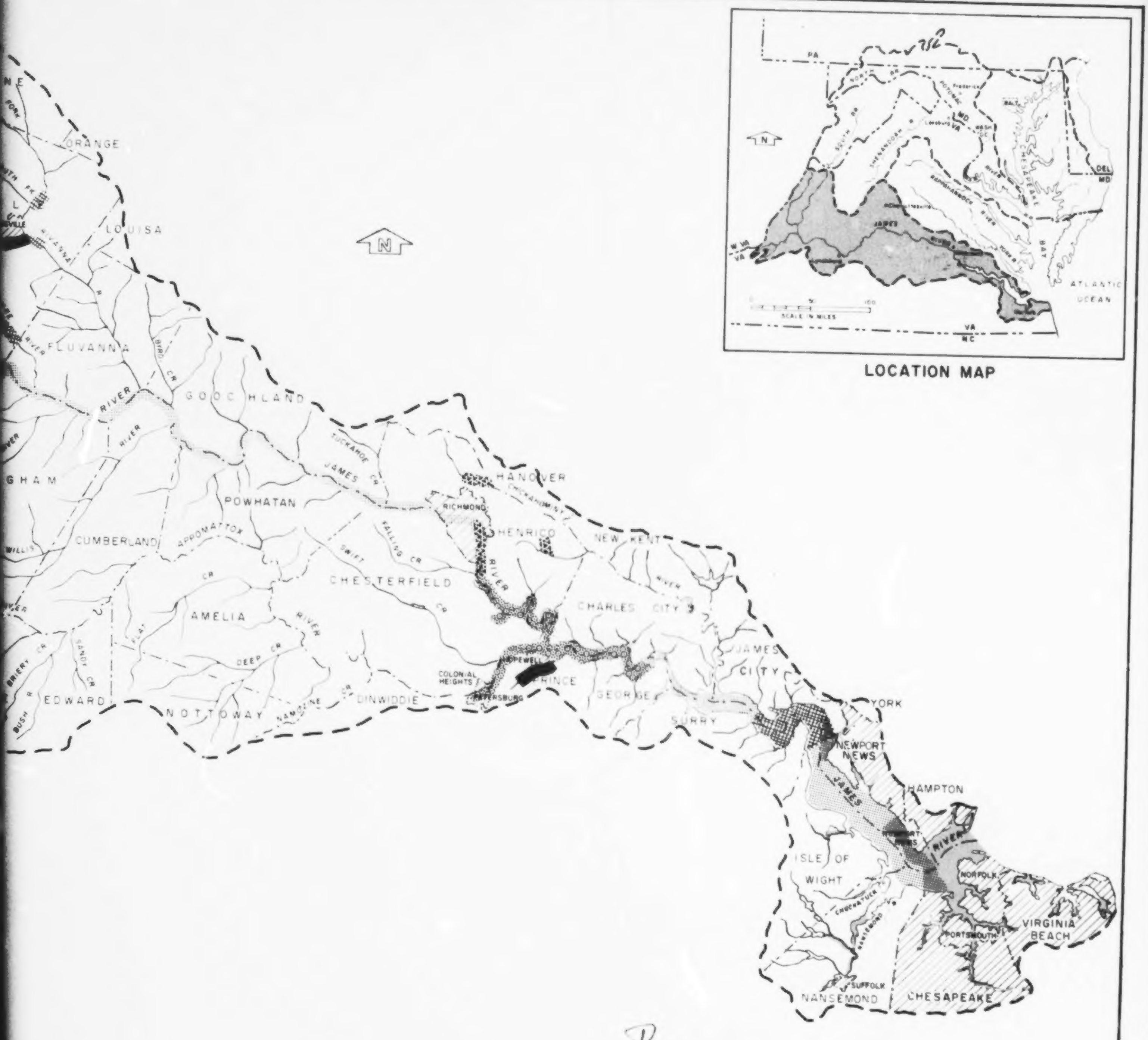
LOCATION MAP
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CHARLES CITY
JAMES CITY
COLONIAL HEIGHTS
HOPEWELL
PETERSBURG
PRINCE GEORGE
DINWIDDIE
NOTTOWAY
EDWARD
SURRY
YORK
NEWPORT NEWS
HAMPTON
ISLE OF WIGHT
NORFOLK
PORTSMOUTH
VIRGINIA BEACH
SUFFOLK
NANSEMOND
CHESAPEAKE
JAMES RIVER
APPOMATTOX
SWIFT CR
FALLING CR
TUCKAHOE CR
CHICKAHOMINY
DEEP CR
BRIERY CR
SANDY CR
BUSH R
WILLIS
CHUCKATUCK
NANSEMOND R

B

JAMES RIVER BASIN

POLLUTED FISH HABITAT

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

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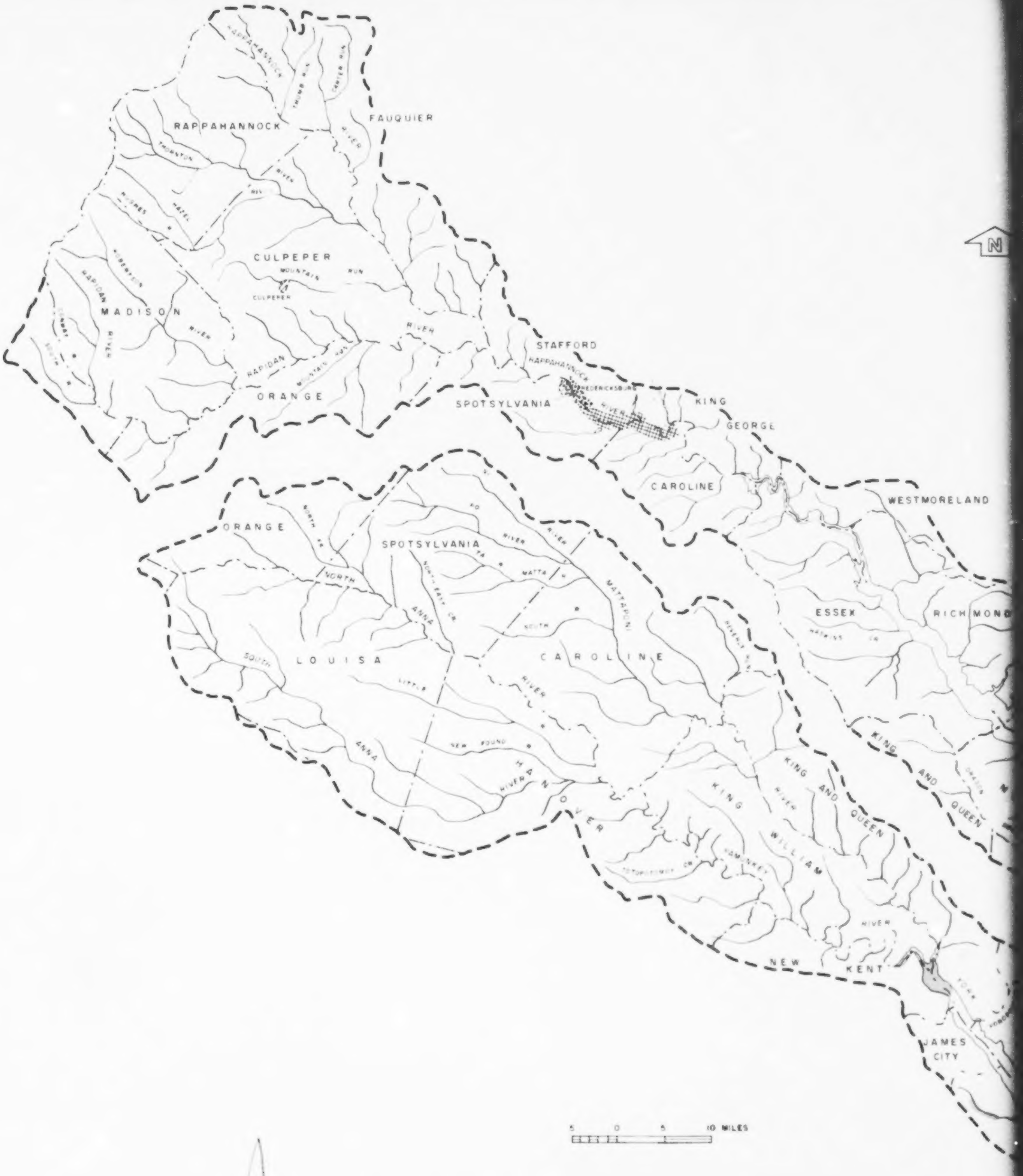
PLATE 14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GEORGE
CAROLINE
WESTMORELAND
ORANGE
SPOTSYLVANIA
LOUISA
CAROLINE
ESSEX
RICHMOND
HANOVER
KING WILLIAM
KING AND QUEEN
KING AND QUEEN
NEW KENT
JAMES CITY
RAPPAHANNOCK
THORNTON
HAZEL
RIVER
RAPIDAN
RIVER
MOUNTAIN RUN
CULPEPER
RAPPAHANNOCK
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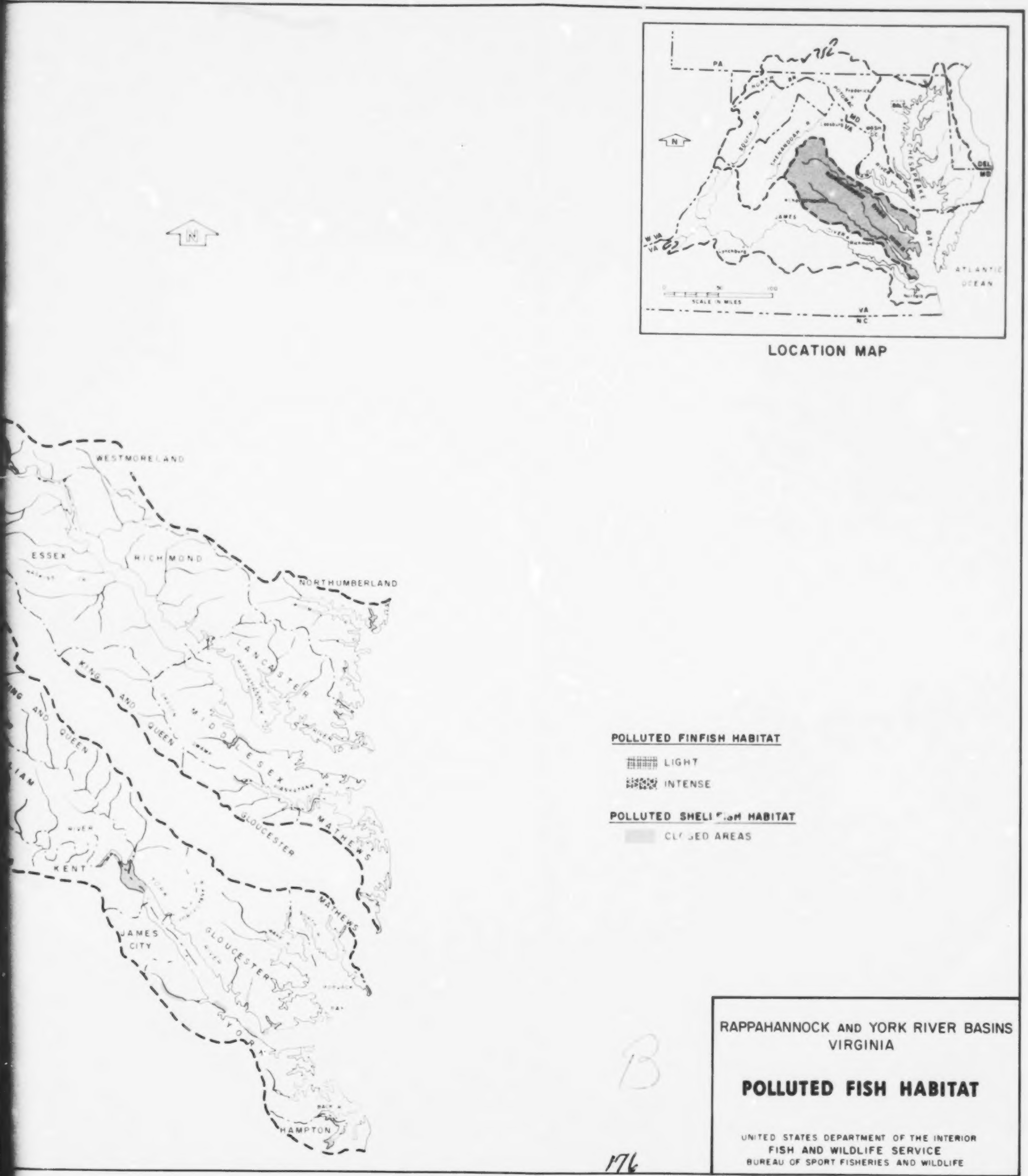
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SCALE IN MILES
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RICHMOND
NORTHUMBERLAND
LANCASTER
KING AND QUEEN
MIDDLESEX
GLOUCESTER
MATHEWS
KENT
JAMES CITY
YORK
HAMPTON
RIVER
POLLUTED FINFISH HABITAT
LIGHT
INTENSE
POLLUTED SHELLFISH HABITAT
CLOSED AREAS

RAPPAHANNOCK AND YORK RIVER BASINS
VIRGINIA

POLLUTED FISH HABITAT

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

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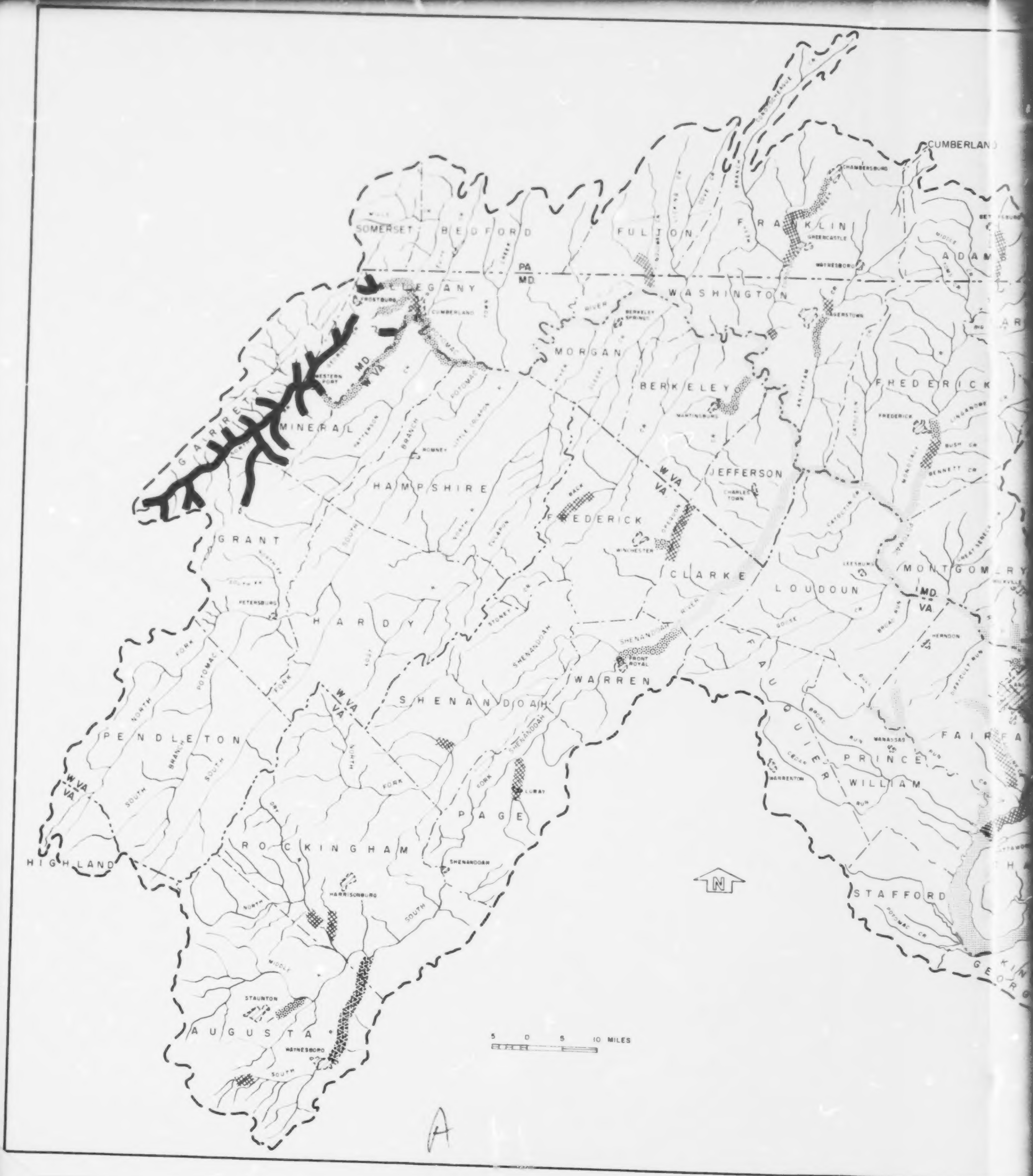
PLATE 15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FRANKLIN
ADAMS
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WAYNESBORO
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ALLEGANY
FROSTBURG
CUMBERLAND
WASHINGTON
BERKELEY SPRINGS
HAGERSTOWN
MORGAN
BERKELEY
MARTINSBURG
FREDERICK
FREDERICK
WESTERN PORT
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GARRETT
MINERAL
ROMNEY
HAMPSHIRE
JEFFERSON
CHARLES TOWN
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WINCHESTER
CLARKE
LOUDOUN
LEESBURG
MONTGOMERY
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GRANT
PETERSBURG
HARDY
SHENANDOAH
FRONT ROYAL
WARREN
FAUQUIER
HERNDON
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SHENANDOAH
PENDLETON
MANASSAS
FAIRFAX
PRINCE WILLIAM
WARRENTON
W VA
VA
LURAY
PAGE
HIGHLAND
ROCKINGHAM
SHENANDOAH
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STAFFORD
HARRISONBURG
KING GEORGE
STAUNTON
AUGUSTA
WAYNESBORO
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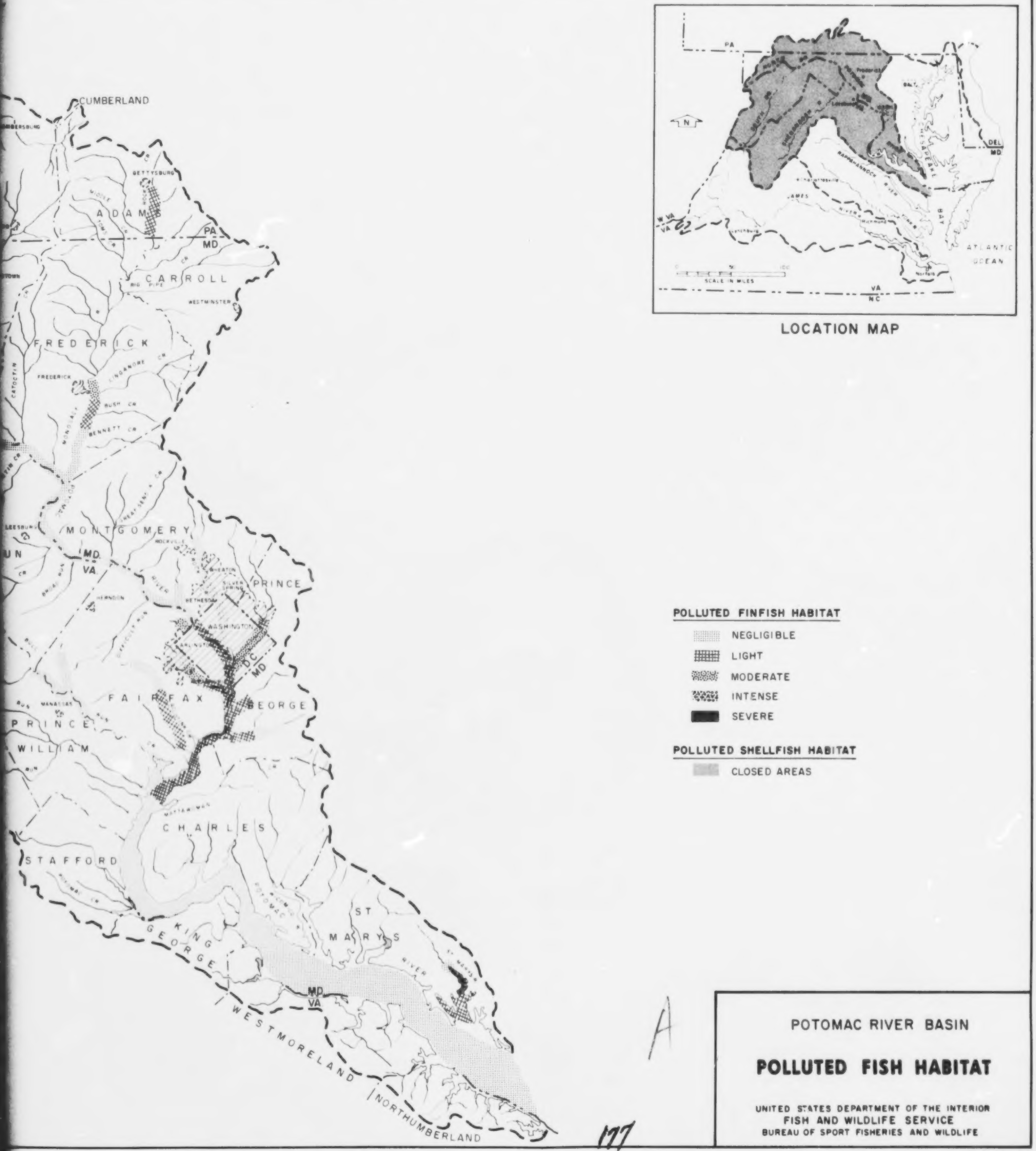
LOCATION MAP
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ATLANTIC OCEAN
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JAMES RIVER
RAPPAHANNOCK RIVER
SCALE IN MILES
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CUMBERLAND
GETTYSBURG
ADAMS
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MD
CARROLL
WESTMINSTER
BIG PIPE CR
FREDERICK
CATOCTIN
LINGANORE CR
BUSH CR
BENNETT CR
MONOCACY
LEESBURG
MONTGOMERY
ROCKVILLE
MD
VA
WHEATON
SILVER SPRING
BETHESDA
PRINCE
HERNDON
WASHINGTON
ARLINGTON
DC
MD
FAIRFAX
GEORGE
MANASSAS
PRINCE
WILLIAM
MATTAWOMAN
CHARLES
STAFFORD
KING GEORGE
POTOMAC
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WESTMORELAND
NORTHUMBERLAND
POLLUTED FINFISH HABITAT
NEGLIGIBLE
LIGHT
MODERATE
INTENSE
SEVERE
POLLUTED SHELLFISH HABITAT
CLOSED AREAS

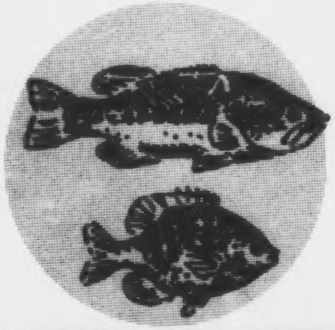
A

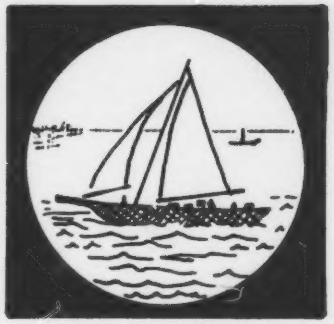
POTOMAC RIVER BASIN

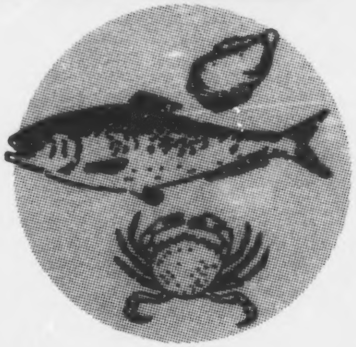
POLLUTED FISH HABITAT

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

PLATE 16







SUPPLY vs. DEMAND

(TABLES 39-44)

TABLE 39

PROJECTED HUMAN POPULATION AND SPORT FISHING DEMAND

CHESAPEAKE BAY AND TRIBUTARIES (EXCEPT SUSQUEHANNA RIVER BASIN)

(IN THOUSANDS)

	1960	1970	1980	1990	2000	2010	2020
Population[1]	7,046	8,299	9,792	11,657	13,715	16,469	19,691
Urban	6,003	7,216	8,662	10,468	12,430	15,024	18,065
Rural	1,042	1,084	1,130	1,190	1,285	1,445	1,626
Fishermen[2]	812	936	1,096	1,299	1,508	1,818	2,146
Fresh Water	512	633	738	871	1,009	1,214	1,430
Salt Water	434	505	596	713	831	1,005	1,189
Fisherman Days[1]	17,540	20,178	23,577	27,881	32,339	38,947	45,938
Fresh Water	11,237	12,803	14,826	17,400	20,072	24,073	28,314
Salt Water	6,303	7,376	8,751	10,481	12,267	14,875	17,624

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1. Columns may not balance owing to rounding.
2. Columns will not balance because some fishermen fish both fresh and salt water.

TABLE 40

PROJECTED DISTRIBUTION OF SPORT FISHERMAN DAYS

CHESAPEAKE BAY AND TRIBUTARIES (EXCEPT SUSQUEHANNA RIVER BASIN)

FISH HABITAT CLASS		FISHERMAN DAYS (THOUSANDS)[1]						
		1960	1970	1980	1990	2000	2010	2020
Fresh Water		11,237	12,803	14,826	17,400	20,072	24,073	28,314
Reservoirs	(R)	3,563	4,060	4,701	5,518	6,365	7,633	8,978
Ponds	(P)	3,082	3,512	4,067	4,773	5,506	6,603	7,767
Streams		4,591	5,231	6,058	7,110	8,201	9,836	11,569
Trout Feeder	(2)	311	354	410	481	555	666	783
Trout	(3)	383	436	505	592	683	820	964
Sucker	(4)	408	465	538	632	729	874	1,028
Bass Feeder	(5)	311	355	411	482	556	667	785
Bass	(6)	919	1,047	1,212	1,423	1,641	1,969	2,315
Pickerel	(7)	279	318	368	432	498	597	702
Bullhead	(8)	9	10	12	14	16	20	23
Catfish	(9)	344	392	454	533	615	738	868
Carp	(10)	1	1	2	2	2	3	3
Tidal	(11)	1,627	1,853	2,146	2,519	2,905	3,485	4,099
Salt Water	(12)	6,303	7,376	8,751	10,481	12,267	14,875	17,624
Bay, Sound & Tidal River		3,782	4,425	5,251	6,289	7,360	8,925	10,574
Ocean & Surf		2,521	2,950	3,501	4,192	4,907	5,950	7,050
Total		17,540	20,178	23,577	27,881	32,339	38,947	45,938

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1. Columns may not balance owing to rounding.

TABLE 41

COMMERCIAL FISHERY HARVEST--STUDY AREA VERSUS U.S.--AVERAGE ANNUAL 1960-1964

CHESAPEAKE BAY AND TRIBUTARIES (EXCEPT SUSQUEHANNA RIVER BASIN)

(IN THOUSANDS)

	SURFACE AREA		FINFISH				SHELLFISH					
			EDIBLE		INDUSTRIAL		OYSTERS		CLAMS		CRABS	
WATER AREA	ACRES	% OF TOTAL 1/	LBS.	% OF U.S. 1/	LBS.	% OF U.S. 1/	LBS.	% OF U.S. 1/	LBS.	% OF U.S. 1/	LBS.	% OF U.S. 1/
Chesapeake Bay	2,041	67.0	24,478	1.2	224,381	10.2	8,439	14.2	5,514	9.8	56,874	23.5
Chester River	35	1.1	58	Negl.	-	-	200	0.3	314	0.6	Negl.	Negl.
Choptank River	69	2.3	123	Negl.	-	-	1,595	2.7	-	-	21	Negl.
Nanticoke River	18	0.6	49	Negl.	-	-	508	0.9	-	-	151	0.1
Patuxent River	30	1.0	45	Negl.	-	-	625	1.1	175	0.3	44	Negl.
Wicomico River	10	0.3	20	Negl.	-	-	153	0.3	-	-	-	-
Potomac River	310	10.2	11,249	0.5	8,588	0.4	2,370	4.0	991	1.8	5,120	2.1
Rappahannock River	98	3.2	5,133	0.2	3,464	0.2	3,842	6.5	Negl.	Negl.	4,104	1.7
York River	55	1.8	2,156	0.1	1,129	0.1	1,140	1.9	239	0.4	2,018	0.8
James River	166	5.5	5,264	0.3	1,885	0.1	1,759	3.0	50	0.1	1,835	0.8
Seaside	214	7.0	718	Negl.	-	-	2,353	4.0	1,447	2.6	5,217	2.2
Total Study Area	3,046	100.0	49,293	2.4	239,447	10.8	22,984	38.7	8,730	15.5	75,384	31.1
U.S. Harvest	-	-	2,081,827	-	2,210,040	-	59,466	-	56,387	-	242,080	-

1/ Does not balance owing to rounding.

TABLE 42

PROJECTED COMMERCIAL FINFISH DEMAND

CHESAPEAKE BAY AND TRIBUTARIES (EXCEPT SUSQUEHANNA RIVER BASIN)

	ANNUAL DEMAND (THOUSAND POUNDS)													
	1960-1964 AV.ANN.		1970		1980		1990		2000		2010		2020	
	EDIBLE	IND.	EDIBLE	IND.	EDIBLE	IND.	EDIBLE	IND.	EDIBLE	IND.	EDIBLE	IND.	EDIBLE	IND.
Chesapeake Bay	24,478	224,381	27,660	280,476	33,045	374,716	46,019	444,274	58,992	511,589	85,918	612,560	113,088	711,288
Chester River	58	-	66	-	78	-	109	-	140	-	204	-	268	-
Choptank	123	-	139	-	166	-	231	-	296	-	432	-	568	-
Nanticoke River	49	-	55	-	66	-	92	-	118	-	172	-	226	-
Patuxent River	45	-	51	-	61	-	85	-	108	-	158	-	208	-
Wicomico River	20	-	23	-	27	-	38	-	48	-	70	-	92	-
Potomac River	11,249	8,588	12,711	10,735	15,186	14,342	21,148	17,004	27,110	19,581	39,484	23,445	51,970	27,224
Rappahannock River	5,133	3,464	5,800	4,330	6,930	5,785	9,650	6,859	12,371	7,898	18,017	9,457	23,714	10,981
York River	2,156	1,129	2,436	1,411	2,911	1,885	4,053	2,235	5,196	2,574	7,568	3,082	9,961	3,579
James River	5,264	1,885	5,948	2,356	7,106	3,148	9,896	3,732	12,686	4,298	18,477	5,146	24,320	5,975
Seaside	718	-	811	-	969	-	1,350	-	1,730	-	2,520	-	3,317	-
Total Study Area	49,293	239,447	55,700	299,308	66,545	399,876	92,671	474,104	118,795	545,940	173,020	653,690	227,732	759,047

TABLE 4

PROJECTED COMMERCIAL SHELLFISH DEMAND

CHESAPEAKE BAY AND TRIBUTARIES (EXCEPT SUSQUEHANNA RIVER BASIN)

ANNUAL DEMAND (THOUSAND POUNDS) 1/

WATER AREA	1960 - 1964 AV. ANN.			1970			1980			1990			2000			2010			2020		
	OYSTER	CLAM	CRAB	OYSTER	CLAM	CRAB	OYSTER	CLAM	CRAB	OYSTER	CLAM	CRAB	OYSTER	CLAM	CRAB	OYSTER	CLAM	CRAB	OYSTER	CLAM	CRAB
Chesapeake Bay	8,439	5,514	56,874	9,199	6,010	61,993	10,549	6,893	71,093	14,093	9,208	94,980	17,553	11,469	118,298	25,992	16,983	175,172	34,431	22,497	232,046
Chester R	200	314	-	218	340	-	250	393	-	334	524	-	416	653	-	616	967	-	816	1,281	-
Choptank R	1,595	-	21	1,739	-	23	1,994	-	26	2,664	-	35	3,318	-	44	4,913	-	65	6,508	-	86
Nanticoke R	508	-	151	554	-	165	635	-	189	848	-	252	1,057	-	314	1,565	-	465	2,073	-	616
Patuxent R	625	175	44	681	191	48	781	219	55	1,044	290	73	1,300	364	98	1,925	539	136	2,550	714	180
Wicomico R	153	-	-	167	-	-	191	-	-	256	-	-	318	-	-	471	-	-	624	-	-
Potomac R	2,370	991	5,120	2,583	1,080	5,580	2,963	1,239	6,400	3,958	1,655	8,550	4,930	2,061	10,650	7,300	3,052	15,770	9,670	4,043	20,890
Rappahannock River	3,842	-	4,104	4,188	-	4,473	4,803	-	5,130	6,416	-	6,854	7,991	-	8,536	11,833	-	12,640	15,675	-	16,744
York R	1,140	239	2,018	1,243	261	2,200	1,425	299	2,523	1,904	399	3,370	2,371	497	4,197	3,511	736	6,215	4,651	975	8,233
James R	1,759	50	1,835	1,917	55	2,000	2,199	63	2,294	2,938	84	3,064	3,659	104	3,817	5,418	154	5,652	7,177	204	7,487
Seaside	2,353	1,447	5,217	2,565	1,577	5,687	2,941	1,809	6,521	3,930	2,416	8,712	4,894	3,010	10,851	7,247	4,457	16,068	9,600	5,904	21,285
Total Study Area	22,984	8,730	75,384	25,054	9,516	82,169	28,731	10,915	94,231	38,385	14,578	125,890	47,807	18,158	156,799	70,791	26,888	232,183	93,775	35,618	307,567

1/ Clams and oysters reported as pounds of meat, and crabs as live weight.

TABLE 44
SUMMARY OF FISHERY SUPPLY AND PROJECTED DEMAND
CHESAPEAKE BAY AND TRIBUTARIES (EXCEPT SUSQUEHANNA RIVER BASIN)

FISH HABITAT CLASS	AV. ANN. SUSTAINED HARVEST CAPABILITY		ANNUAL DEMAND (IN THOUSAND POUNDS)						
	W/EXISTING POLLUTION	WITHOUT POLLUTION	1960	1970	1980	1990	2000	2010	2020
FRESH WATER	25,234	26,858	22,375	25,041	29,823	37,927	46,116	61,421	72,987
RESERVOIRS (R)	881	881	3,563	4,060	4,701	5,518	6,365	7,633	8,978
PONDS (P)	2,424	2,424	3,082	3,512	4,067	4,773	5,506	6,603	7,767
STREAMS	21,929	23,553	15,730	17,469	21,055	27,636	34,245	47,185	56,242
TROUT FEEDER (2)	9	10	155	177	205	241	277	333	391
TROUT (3)	17	19	191	218	252	296	342	410	482
SUCKER (4)	67	68	408	465	538	632	729	874	1,028
BASS FEEDER (5)	87	93	311	355	411	482	556	667	785
BASS (6)	939	1,002	919	1,047	1,212	1,423	1,641	1,969	2,315
PICKEREL (7)	166	167	279	318	368	432	498	597	702
BULLHEAD (8)	8	14	9	10	12	14	16	20	23
CATFISH (9)	746	765	344	392	454	533	615	738	868
CARP (10)	5	11	1	1	2	2	2	3	3
TIDAL (11)	19,885	21,404	13,113[1]	14,486	17,601	23,581	29,569	41,574	49,645
SALT WATER (12)[2]	448,230	451,749	401,107[1]	478,307	607,993	752,241	893,180	1,157,668	1,420,489
SHELLFISH	105,000	106,538	107,098	116,739	133,877	178,853	222,764	329,862	436,960
OYSTERS[3]	23,000	24,538	22,984	25,054	28,731	38,385	47,807	70,791	93,775
CLAMS	12,000	12,000	8,730	9,516	10,915	14,578	18,158	26,888	35,618
CRABS	70,000	70,000	75,384	82,169	94,231	125,890	156,799	232,183	307,567
EDIBLE FINFISH	103,230	105,211	54,562	62,260	74,240	99,284	124,476	174,116	224,482
INDUSTRIAL FINFISH	240,000	240,000	239,447	299,308	399,876	474,104	545,940	653,690	759,047

[1] Commercial fishery represents 1960-1964 average annual catch.
[2] Does not include ocean and surf sport fishing.
[3] Productive capability of existing oyster grounds under current management levels.